DOCUMENT RESUME

ED 226 988 SE 040 729

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TITLE Training Student Organizers Curriculum.
INSTITUTION Council on the Environment of New York City, N.Y.
SPONS AGENCY EXXON Corp., New York, N.Y.; McDonald's Corp., Oak Brook, Ill.
PUB DATE 83
NOTE 93p.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Air Pollution; *Citizen Participation; *Energy Conservation; *Environmental Education; Higher Education; Noise (Sound); Physical Environment; Pollution; Secondary Education; Solid Wastes; *Student Projects; *Urban Improvement; Wastes; Water Quality; Water Resources

ABSTRACT

The purpose of this curriculum is to help teachers and field supervisors at the college, high school, and advanced junior high school level train students to organize environmental improvement projects. It can also be used by graduate/undergraduate students who are supervising secondary school students. The curriculum may be started at any point and used within the framework of a regular course, most lessons fitting into the usual 40-50 minute class period. Part I consists of five units related to urban environmental issues and improvement projects. These units focus on energy conservation; urban design/neighborhood open space beautification; solid waste; water sources/quality; and air pollution. Each unit includes an introduction, instructional strategies, and suggested student projects. Suggested activities related to noise, food pollution, and hazardous wastes are also included. Part II consists of six units related to organizing an environmental improvement/citizen participation program. Units focus on rationale for citizen participation; needs assessment and project selection; project planning and initial field organizing; project monitoring and ongoing participation strategies; evaluation methods; and a final unit focusing on legislative action. Aims and instructional strategies are provided for each of these units. (JN)

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TRAINING STUDENT ORGANIZERS CURRICULUM

By
MICHAEL ZAMM
and
DENISE HURTADO

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1251 Avenue of the Americas
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INTRODUCTION AND HISTORY

The purpose of this curriculum is to help teachers and field supervisors at the college, high school and advanced junior high school level train students to organize environmental improvement projects. It can also be used by graduate and undergraduate students who are supervising high school and junior high school students. The curriculum may be started at any point, since the units are self-sufficient; and may be used within the framework of a regular course or in a less formal setting. Many of the lessons fit into the usual 40-50 minute classroom period while others require longer or more flexible schedules. The environmental and organizing sections are written as separate parts; the organizing process in the second section can be applied to any of the environmental issues or projects discussed in the first section.

Although the title refers to urban environmental improvement projects most of the project suggestions are suitable for suburban and rural areas as well. Indeed some ideas are better adapted to these locales. The organizing section represents a basic set of processes and is thus applicable to all geographic locations.

The curriculum was developed and is used by the Council on the Environment's Training Student Organizer (TSO) Program in New York City. At present three colleges of the City University (Brooklyn, Lehman, and City Colleges), and six New York City public high schools (James Madison, Lafayette, and FDR in Brooklyn; City-As-School, A. Philip Randolph Campus H.S. in Manhattan; and DeWitt Clinton in the Bronx) have instituted courses and internships to train students to organize environmental improvement projects. This network is expected to expand in the near future.

Since CENYC's TSO Program began in 1979, 475 students have organized some 26 projects serving six neighborhoods in three boroughs. Nearly 3,500 school children, teenage youths, and community residents have participated in student-organized projects involving solid waste (anti-litter, recycling), environmental arts and beautification (murals, park design), energy conservation, and more. James Madison High School, for example, has established an Urban Studies Institute for juniors; the Institute offers courses in the Urban Environment (Fall Term) and Urban Economics (Spring Term) with a special organizing component. Madison also offers a senior year internship in urban studies and environmental organizing for those students who wish to continue in the program. Student organizers from the Institute work with and are supervised by Brooklyn College students who are interns in the College's Political Science and Sociology Departments. Brooklyn College art students work with the high school and college student organizers and the community in developing participatory design projects (murals, park design).

A community organization, the Community Education Action Coalition(CEAC), consisting of over 25 citizens' groups, public agencies, business organizations, and tenant associations, has been formed to help students with publicity, fundraising, and political support in the Madison High/Brooklyn College community. The principal of Madison High is a Co-Chairperson of CEAC and Madison is CEAC's official base. Brooklyn College and CENYC are using the Madison model to interest other high schools in Brooklyn in TSO.

While the Brooklyn College/Madison H.S. program is a possible model, there are other ways of putting this curriculum into action. Lehman College in the Bronx offers a course in the Geography and Geology Department, "Urban Environmental Management," which has an organizing component. The college students have organized successful anti-litter and recycling programs in the surrounding community. Several students have gone on to organize additional projects in the areas in which they live. The Lehman students work cooperatively with the United Associations for Bedford Park, a tenant and merchant organization in the Northwest Bronx. Lehman has recently started to work with a local high school (DeWitt Clinton).

In Manhattan, City-As-School High School (CAS) students have coordinated a successful aluminum recycling project in an elementary school (P.S.3) in Greenwich Village for the past four years and have worked actively with the school's executive committee. A regular seminar in environmental organizing has been established at CAS, and CAS students will soon be organizing a number of environmental projects in lower Manhattan. Also in Manhattan, City College of New York and its affiliated high school have initiated mural and anti-litter projects.

School-based organizing models abound, although the college/high school collaboration seems strongest. Each college, high school, junior high school or graduate program must develop its own best approach. The specific model you choose should not only reflect the optimum possibilities for delivering student based project services to a particular community, but, most importantly, should provide the most positive interpersonal and academic training experiences for participating students. Help from an organization in the local community, such as a CEAC, is advantageous, but not necessary for a successful program.

This curriculum provides the guidance and structure to help the program get started and grow in your school and community. If help with such a program is needed and cannot be found locally, call or write to Michael Zamm at the Council on the Environment for New York City, 51 Chambers Street, Room 228, New York City, NY 10007, (212) 566-0990.

ACKNOWLEDGEMENTS

Special assistance in the preparation of this curriculum was given by:

John Tuminaro, James Madison High School
Leo Zanderer, Brooklyn College
Bunyan Bryant, University of Michigan School of Natural Resources
George Diamantopoulos, Formerly of CENYC
Al Desetta, CENYC
Louise Bryant, CENYC

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FEEDBACK SHEET

Please cut along the dotted line and return the sheet to CENYC after you have filled it out.

NAME _____ POSITION _____

SCHOOL OR ORGANIZATION _____

_____

ADDRESS _____

TELEPHONE _____

Place a check in the appropriate column.

Part I: Environmental Issues and Improvement Projects	RATINGS POOR	FAIR	SATIS	GOOD	EXCELLENT
1. Did Part I significantly add to your students' background on environmental issues and information?	____	____	_____	____	_____
2. What about the individual units?					
Unit A: Energy Conservation	____	____	_____	____	_____
Unit B: Neighborhood Open Space Beautification	____	____	_____	____	_____
Unit C: Solid Waste	____	____	_____	____	_____
Unit D: Water	____	____	_____	____	_____
Unit E: Air	____	____	_____	____	_____
3. Was the Addenda Section helpful?	____	____	_____	____	_____

Comments for Part I: _____

_____

_____

_____

_____

Part II: Organizing An Environmental Improvement/Citizen Participation Project					
1. In general do you feel this section presented a clear and usable structure for organizing a project?	____	____	_____	____	_____
2. Were you able to adapt it to a specific project that you decided to organize?	____	____	_____	____	_____

Part II: Organizing An Environmental Improvement/Citizen Participation Project (continued)	POOR	FAIR	SATIS	GOOD	EXCELLENT
3. Did at least some of the organizers become skilled in at least one organizational activity, e.g. preparing a press release, composing a flyer, fundraising, etc?	___	___	___	___	___
4. How would you rate the individual units?					
Unit A: Citizen Participation Rationale	___	___	___	___	___
Unit B: Needs Assessment and Project Selection	___	___	___	___	___
Unit C: Project Planning and Initial Field Interviewing	___	___	___	___	___
Unit D: Project Monitoring and Ongoing Participation	___	___	___	___	___
Unit E: Evaluation	___	___	___	___	___
Unit F: Legislative Action	___	___	___	___	___
5. Do you feel the organizers developed a knowledge of and a feeling for the process, both conceptual and practical, of organizing an environmental improvement project?	___	___	___	___	___

Comments for Part II: _____

_____

_____

_____

_____

Final Evaluation

1. How many lessons from the entire curriculum did you complete with your class? _____
2. Did your class or group enjoy the program? ___ ___ ___ ___ ___
3. Did you feel this curriculum led to a valuable education and action program? ___ ___ ___ ___ ___
4. How would you rate this environmental education and action program? ___ ___ ___ ___ ___

Comments _____

_____

_____

_____

_____

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READINGS ON ORGANIZING

PART I

URBAN ENVIRONMENTAL ISSUES AND IMPROVEMENT PROJECTS

UNIT A: ENERGY CONSERVATION

Introduction

Energy is defined as the ability to do work.

Energy is a household word and for a very good reason. The economy of the United States (and all other nations) is linked to the consumption of energy, and the dwindling supply of petroleum and natural gas threatens economic well-being.

Gasoline shortages, blackouts, high fuel prices and a heavy dependence on foreign sources of precious oil are problems that can be attributed to our nation's appetite for and decreasing domestic supply of cheap, available fuel.

The United States has only 6% of the world's population, yet we use 1/3 of the world's energy supplies. One-quarter of the energy we use is wasted. More than 40% of our national energy consumption is used for our homes (15%), and transportation (25% - approximately one half of which is for automobiles). In the home, 75% of the energy used is for heating and cooling.

The need for citizen involvement in energy conservation is clear. Alternate sources of energy, such as solar power, energy recovered from garbage and coal, etc. can only partially satisfy our needs. Switching to solar power, for example, will take time and a great deal of money. Converting garbage to energy is also expensive and is an as yet unproven technology in this country. Coal also poses pollution hazards. Pricing and production control mechanisms are effective but are not the only methods of reducing energy use. Mass voluntary conservation can be effective.

Holding a refrigerator door open, ironing only one item, leaving a light, television or radio on in an empty room waste precious fuels. So do stop-and-go driving, running hot water excessively, or purchasing high energy-consuming appliances, such as self-cleaning ovens or frost-free refrigerators.

Home insulation (e.g., storm windows and doors, weatherstripping and other materials that block cold and retain heat in the winter) conserve energy and lower fuel bills.

The same awareness and concern that we now have for better health and cleaner air and water are needed to help solve the energy problem. It is up to each citizen to conserve energy, and to educate and encourage others to do so.

#1 Aim: To learn about energy, its types and sources.

Motivation: Demonstrate the light and heat energy of the sun by holding a radiometer close to the window on a sunny day.

Discussion:

a. What types of energy are causing the vanes of the radiometer to rotate?
b. This heat and light energy comes from what source?
c. Let's list the various types of energy and the natural and man-made sources.
d. Make a chart like:

Types of Energy	Sources of Energy	
	Natural	Man-made
Electrical	Oil, coal, natural gas, water, uranium	Power plants (oil-fired, coal-fired, hydroelectric, nuclear, etc.)
Heat	Sun, human body, oil, coal, natural gas	Boiler...
Light	Sun, oil, coal, natural gas	Power plants (oil-fired, etc.)
Mechanical	Wind, water, human body	Lever, pulley, pencil-sharpener...
Sound	Human voice...	Saw, pencil-sharpener, musical instruments....
Atomic	Uranium	Nuclear power plant

e. What kinds of activities, machines, etc. do we need these different kinds of energy for?
f. What is the one common factor or theme involved with these various types of energy and the things they are used for, i.e., how can we describe energy?
g. The students should come to understand that energy is the ability or capacity to work. Energy is the power by which anything moves itself or something else or acts upon other things.

#2 Aim: To learn why energy conservation is important.

Motivation: Speakers from a local environmental organization, an energy related governmental agency, or energy related business concern to talk on energy conservation.

Discussion:

High school and college students will most probably comprehend the need for energy conservation from their own experiences and readings, and from the speaker's presentation. The need to conserve the energy we now have and to use all energy sources judiciously will become clear.

#3 Aim: To learn ways of conserving energy in school, home, and neighborhood.

Motivation: At least one of the speakers (suggested for #2) should give a demonstration and talk on methods of conserving energy.

Discussion:

a. Where in the school and in and out of your homes could you conserve oil, coal, or gas?
b. What's the most obvious area for conservation in school?
c. Explain to students that lighting represents a large portion of school electrical use (60% of all electricity use in New York City schools, for example) and nearly 40% of all electric power usage in America.[1]
d. Outline some other possibilities for conservation in the school, e.g.,
   . office equipment
   . lighting in hallways
   . school kitchen (oven, hot water use)
   . boiler room
   . air conditioning systems if applicable
   . etc.
e. What are some possible strategies for home conservation?
   . lighting
   . appliances
   . household heating and hot water
   . household cooling
f. List some of the specific conservation possibilities in each area, e.g., appliances - turning off T.V. when nobody is watching, etc.
g. What about conservation other than the home and school?
   . use of automobile
   . more public transit
   . bikeways

---

[1] Richard G. Stein and Carl Stein, Research, Design, Construction and Evaluation of a Low Energy Utilization School prepared for the Board of Education, City of New York with the support of the National Science Foundation (New York 1974). Phase 1: interim report, sections a-e, p. b,7

Follow-up

- Ask students to devise a strategy for conservation in their own homes and to keep a record of savings.
- Students should report on their home conservation projects and compare notes.
- A lighting conservation project in the classroom would also be a good action project (see Energy Conservation Education: An Action Approach, Part II, M. Zamm and B.C. Samuel, Council on the Environment of New York City and the New York State Energy Office, New York:1982. Write to the NYS Energy Office, 2 Rockefeller Plza, Albany, N.Y. 12223 for copy.)

#4 Aim: To learn about the sun as a source of energy.

A. Motivation: Speaker on solar and other alternate sources of energy.

Discussion:

a. Students will already have discussed the shortages of oil and gas. Conservation as one strategy has been explored.
b. The students, through their experiences and observations, have probably heard of the alternative sources of energy -- solar, wind, geothermal, small hydro-electric plants, etc. The speaker's presentation will further clarify these sources with a particular emphasis on the most promising alternative source -- the sun.
c. To demonstrate solar energy, students should perform the following set of simple procedures. (See attached experiment, Figure I)

B. Motivation: Take students on a trip to see a well-insulated house that uses solar energy.

Discussion:

Once back in school, have students fill out the worksheet on pages 7,8 to demonstrate the practicality of solar power.

Follow-up:

Try to devise a comprehensive energy strategy for the U.S. which includes the use of solar power and conservation. From their experiences in Lessons 3 and 4, students will have experienced the potential of these two strategies and they can now do research to determine the actual percentage of U.S. energy needs which could be met through the use of solar power and conservation practice. Students can also assess the potential for wind energy and other alternative sources. To start such a research project, have the students read:

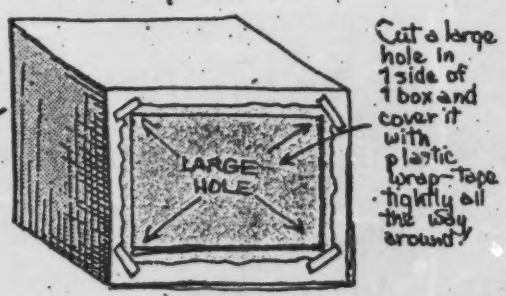
"Solar Energy: An Introduction," Solar Energy Education Packet, Center For Renewable Resources, 1001 Connecticut Avenue NW, Suite 510, Washington, D.C. 20036

HOW MUCH HOTTER DOES A HOUSE GET WHEN THE WINDOWS FACE SOUTH INSTEAD OF NORTH?*

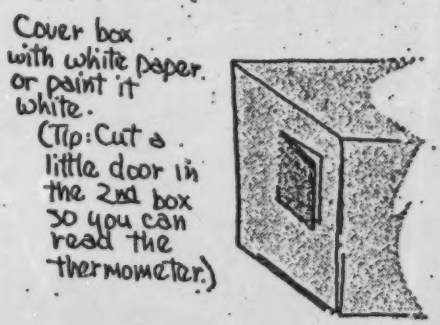
FIGURE I

MATERIALS:

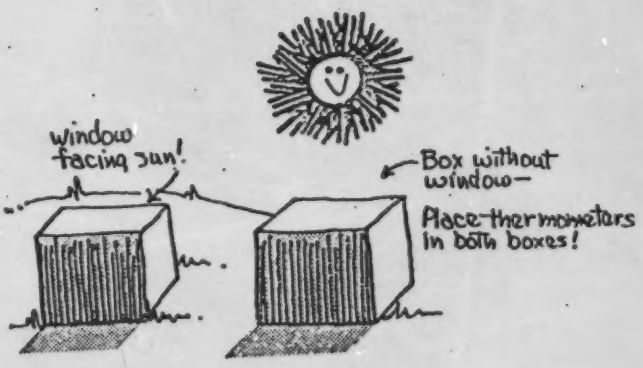
- 2 Cardboard boxes of same size
- White paint or paper
- 2 Thermometers
- Plastic wrap
- Masking tape



Paint both boxes white, or cover them both with white paper.



Place a thermometer in each box and put them in the sun.



Record the temperatures after 10 minutes, 20 minutes, and 30 minutes. What do you find?

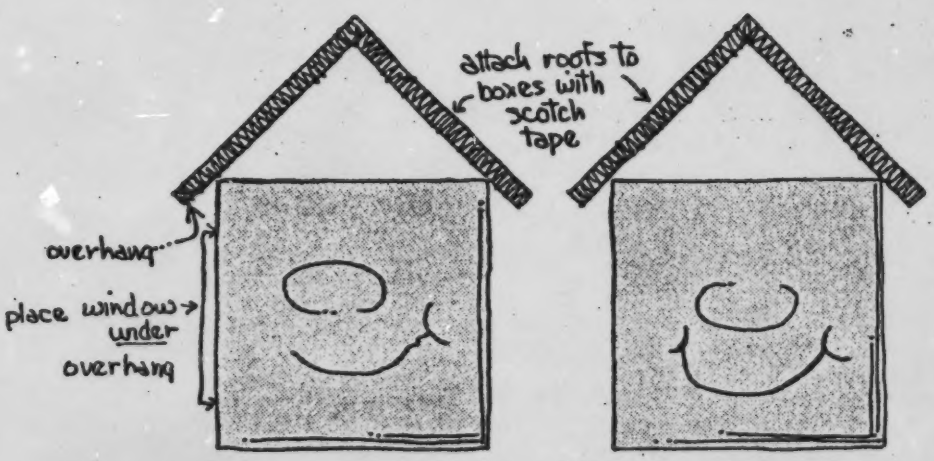
* Solar Energy Education Packet, Ctr for Renewable Resources, Washington, D.C.:1978. (Orig. from Science Activities in Energy, Dept. of Energy, Oak Ridge, Tn:1978.)

OTHER IDEAS TO EXPLORE:

Try this experiment at different times during the day.

Does this make any difference?

Add an overhang to both boxes:
Does this make any difference? How would the overhang affect this experiment at different times of the year?



Try cardboard overhangs of different sizes to see if it makes a difference.

SOLAR ECONOMICS WORKSHEET *

(excerpt from "Solar Economics Revisited" by
Alan Okagaki and Ken Bossong of Citizens' Energy
Project, 1413 K Street, NW, Washington, D.C. 20005)

Historically, the prime factor which has controlled the popularity of solar systems has been economics. From the 1920's through the 1940's, there was in fact a thriving solar water heater business in Florida and in parts of Southern California. During the later 1940's and 1950's, however, lowered costs for electricity and natural gas made solar water heating economically unattractive, forcing solar water heaters off the market. The situation is reversing itself today. Since the Arab Oil Embargo of 1973, prices for all conventional sources of energy have sky-rocketed, and they will continue to climb in the future. As prices rise, solar water heating becomes more economically attractive in more parts of the country. In addition, the price of solar water heaters will quite likely drop lower and lower as the industry develops and more efficient production techiques are devised and instituted. Although generalizations about solar economics are somewhat difficult to make, it would be safe to say that some kind of solar water heating system can be cost-effectively installed today in homes in any part of the country.

In the near future, solar water heating will probably become a matter of necessity rather than of economic preference. Natural gas, the cheapest conventional source of energy, is in very short supply already. Curtailments of natural gas have grown progressively worse each winter since the early 1970's and all indicators suggest that the domestic natural gas supply will continue to deteriorate. According to the U.S. Geological Survey and most other studies, the United States will deplete all of its proven, economically-recoverable natural gas reserves (at current consumption levels) within ten to twenty years. Thus, while solar heating might be expensive now in comparison to natural gas, the forthcoming curtailments and shortages of that fuel may force many homeowners to install solar water heaters because there is no alternative.

A new approach to calculating economic viability is called "life-cycle costing". With life-cycle costing, the consumer tries to evaluate total costs over the life of the system rather than looking strictly at initial cost. Performing a rigorous life-cycle costing is tedious, time-consuming and difficult. However, one can get a general idea of how cost-effective a solar water heater is by calculating a "straight-line depreciation." Thus:

A) The average (4 person) household consumes about:
400 kilowatt-hours/year
1.365 million BTU/year

B) Fuel costs in your area are:
_____/kilowatt-hour
_____/ BTU
If you have your fuel or electricity bills, you will find this information printed on the bill.

---

*From Solar Energy Education Packet, Center for Renewable Resources, 1001 Connecticut Avenue, NW, Suite 510, Washington, DC 20036

C) If you multiply (A) and (B) together, you will get the amount you are spending per year for water heating. $_____.

D) Assuming energy prices go up 10%/year, 10 years from now, they would have increased more than 250%. Thus you can expect to pay over twice as much 10 years from now as you do today for water heating. The average price of energy at the 10% rate is 1.75 times higher than the first year rate. Thus, multiply Entry C (amount of money now spent on water heating) by 1.75 to obtain the average annual water heater bill over the 10 year time period.

E) If you buy a solar water heater, the solar unit will supply between 65% of your water heating energy (if you live in Maine) to about 90% if you live in Miami or Phoenix. Considering your local climate and geographic location, guesstimate what percentage of water heating energy your solar system will provide (or consult your local weather service). $_____

F) The amount of money you will save by installing your solar water heater over a ten-year period is thus the average annual water heating bill (step D) multiplied by 10 years and also multiplied by the percentage of solar assistance (i.e., step E). That is:
(Entry E) X (Entry E) X (10 years) = total solar water heating savings.

G) This is the maximum amount of money you could invest in a solar water heater and expect it to pay back in 10 years. This formula disregards opportunity and maintenance costs above and beyond those for the conventional water heater.

H) Deduct $250 for maintenance costs over 10 years
(Entry F) - ($250) = Maximum allowable investment corrected for maintenance costs.

I) To incorporate an opportunity cost into your calculations, determine what the loss would be to you if you invest money now in a solar unit rather than save it and earn interest over the next several years. Assume, for example, that you determine that your loss would be the equivalent of 40% of the initial investment, then the opportunity costs would be:
.40 X (Entry H) = Opportunity Cost

J) By deducting Entry I from Entry H, you arrive at the maximum allowable investment with all corrections.
(Entry H) - (Entry I) = $_____

Entry J gives an approximate figure of how much you could invest in a solar water heater and have it pay for itself in 10 years. If a shorter or longer period of time is desired, adjustments should be made accordingly. As can be easily seen, a number of approximations and projections have been made in this analysis; they were, however, generally "conservative;" i.e., they tend to make solar water heating seem less viable than it really is.

#5 Aim: To learn how energy affects urban housing.

Discussion: (use as motivation)

a. What are the key functions that consume energy in an apartment building?
   . Heat and hot water
   . Light
   . Electrical appliances for many purposes: elevator, sprinklers.
b. Can a building function for any period of time without energy?
c. What do you think happens to a building when the energy systems start to decline?
d. Which of the energy systems is usually most essential to building upkeep and occupant health? (Heat and hot water - the boiler).
e. What happens when the landlord is no longer able to provide heat and hot water?
   . Tenants suffer.
   . Tenants who can, leave and/or organize a rent strike.
   . Landlords let all services decline.
   . Building deteriorates.
f. Are there any possible solutions to these problems?
   . Have the students write for and read the Introduction, pages iii and iv, to No Heat, No Rent - An Urban Solar and Energy Conservation Manual, Energy Task Force, 156 Fifth Avenue, New York, New York 10010: 1977.

FOLLOW-UP TO UNIT A

List of Possible Projects

1. Lighting conservation (e.g., turning out banks of lights) in the classroom, halls, and other areas in a school. Write to Council on the Environment of New York City for materials and help with recording savings.

2. Home conservation. Conserving on heating, cooling, lighting, hot water, and appliances at home and recording results and savings. Use Energy Conservation Education: An Action Approach, Home Conservation Work Sheets. Address to write for copy, see page 4.

3. Passive solar techniques for buildings, e.g., construction and installation of awnings, trellises, shutters.

4. Weatherization and insulation of houses.

5. Alternative transportation project where people in school carpool, take public transit, etc.

Readings on Energy

Brownout & Slow-Down, Richard Saltonstall, Jr. and James K. Page, Jr., Walker and Company, New York: 1972.

Energy Conservation and Public Policy, edited by John C. Sawhill, Prentice-Hall, Inc., Englewood Cliffs, New Jersey: 1979.

Energy We Can Live With, edited by Daniel Wallace, Rodale Press, Inc., Emmaus, Pennsylvania: 1976.

The Food and Heat Producing Solar Greenhouse, Ricker Fisher and Bill Yanda, John Muir Publications, Santa Fe, New Mexico: 1976.

The Fuel Savers, Dan Scully, Don Prawler and Bruce Anderson, Total Environmental Action, Church Hill, Harrisville, New Hampshire: 1976.

The National Energy Plan, Executive Office of the President, Energy Policy and Planning, Washington, D.C.: 1977.

Rays of Hope - The Transition to a Post-Petroleum World, Denis Hayes, W.W. Norton & Co., Inc., New York: 1977.

The Poverty of Power: Energy and the Economic Crisis, Barry Commoner, Alfred A. Knopf, Inc., New York: 1976.

UNIT B: URBAN NEIGHBORHOOD OPEN SPACE BEAUTIFICATION

Introduction

Urban neighborhoods are primarily environments in which most of the physical characteristics are man-made structures: buildings, roads, bridges, tunnels, and even telephone booths, traffic control signals and fire hydrants. The design of the city is ever changing: old structures are torn down, modified, or replaced with new ones.

Open spaces within the city, such as parks, playgrounds, lots, gardens and landscaped areas are an important part of the total environment. Trees, plants, vines, grass, flowers and vegetable gardens add aesthetic value, provide oxygen, cut down on noise pollution by acting as a buffer, and bring cool breezes and shade to hot city streets. Every small park is a welcome retreat in a busy street.

Designing a city involves careful architectural, engineering, and aesthetic planning. The politicians, planners, designers, engineers, architects and other professionals who make most of the large-scale decisions, must interpret and anticipate the needs of the general public.

A street is more than a linear surface on which people and vehicles travel back and forth. The buildings and other architectural and natural elements that line a street are not just a part of the street, they are the street. The structures, the people and the events that take place on the street gives the street its special character.

Street maintenance and local activities, facade restoration, street tree care, turning vacant lots into parks, other urban greening projects, and outdoor art such as mural painting and sculpture, improve the quality of life in a neighborhood.

Citizen participation in such projects brings pride, uncovers creative talents and reflects the special character of the people who live in the neighborhood. The quality of a city can be improved by the effect of the citizens who care.

#1 Aim: To understand the concept of urban design.

Motivation: Have the students read "The Collective Perspective of Cities - We Reflect Our Urban Landscape," by Lawrence Halprin, Urban Open Spaces, Cooper Hewitt, New York: 1979; or a related work (see readings).

Discussion:

a. What do we mean by the built environment?
   - The physical characteristics of our neighborhoods are primarily man-made structures, e.g., buildings, homes, streets and sidewalks, staircases, fences, etc.
   - Within the built environment are natural elements, e.g., trees, grass, lawns, parks, and open spaces.

b. What are the basic elements of urban design?
A well-designed urban structure must take three main points into consideration:
- Structure: the structure must be made with good construction materials.
- Function: satisfy the purpose of the structure.
- Appearance: be aesthetically pleasing.

c. What are the aesthetics of the urban environment?
- Visual design: lines, shapes, forms, colors, textures, shadows, patterns, proportion, scale.
- The functional design plan: a good urban design must be functional as well as aesthetic. The visual design in our neighborhoods must meet the practical and psychological needs of the people who live in the neighborhood.

Follow-up Activities:

1) Have the students take a neighborhood walk with cameras, sketch pads, a compass, tape measure, maps and note pads.

2) Have the class record:
   a. The transportation systems, e.g., bus routes, cars, subways, railroads, taxis, etc.
   b. Residential streets, commercial streets; also notice which streets are heavily pedestrian and which are mainly for vehicles.
   c. Types of streets, e.g., canal-type streets, squares, plazas, street islands, parks, curved streets, broad avenues and boulevards.
   d. Surface and condition of buildings, streets, sidewalks in terms of curbs, potholes, surfaces of buildings, etc.
   e. Record city furniture, e.g., hydrants, street lights, benches, garbage cans, street trees, signs, telephone poles, mailboxes.
   f. Buildings, e.g. commercial, industrial, educational, institutional.
   g. Housing types, e.g., one-family homes, multiple-unit housing.
   h. Area residents, e.g., age, ethnic background and cultures.
   i. Fountains, statues, sculptures, murals, graffiti, recreational areas, etc.

#2 Aim: To discuss urban open space design and the greening of open spaces.

Motivation/Discussion:

a. What do we mean by open space?
   - Open spaces within an urban environment include:
     Parks, pocket parks, vacant lots, vegetable gardens, landscaped areas, playgrounds, plazas, streets, squares, front yards.

b. How will greening open spaces benefit urban residents?
   - Trees, plants, grass provide us with beauty, shade, oxygen, and cool breezes during hot weather; cut down on noise pollution by acting as buffers; and also provide a natural habitat for birds, insects, animals, etc.

c. What are some possible open space greening projects?
   . Turning vacant lots into pocket parks, planting flowers or vegetables on vacant lots or on rooftops, park re-design, street tree planting and care, plant identification, locating and treating diseased trees.

#3 Aim: To learn about street beautification and how it relates to urban design.

Motivation: Draw a simple diagram of the area observed on the field trip of Lesson I in this unit. Have the students suggest design improvements and/or draw a diagram of the re-design of this area.

a. What were some of the types of street furniture that were seen?
b. What part do signs (both directional and informational) play in urban design? (Mention that advertisements and directional signs are a necessary part of the urban environment and should be considered as part of the overall urban design.)
c. What would make the streets better? e.g., more trees, benches, window boxes, fewer or better-designed parking areas, wider sidewalks.

Discussion:

a. Why is it important to beautify our neighborhoods?
   . People tend to respond to their environment and to other people in a healthier and more effective way when they are in an aesthetically pleasing environment.
   . A visually pleasing neighborhood encourages greater use of the neighborhood and produces a more stable economy.
b. By beautification do we mean simply appearance?
   . Neighborhood beautification involves planning, designing, community effort and cooperation. The design of a space must meet the aesthetic, functional and psychological needs of the people who inhabit and travel through the space. For example, painting a mural on an outdoor wall will personalize the wall as well as beautify it; a small park can be designed so that senior citizens can comfortably and easily talk to each other, so that handicapped persons can move through the space, and so that pedestrian traffic may find it an inviting resting place. Park benches can be painted, and other ornaments added for visual and functional effect.

Follow-up Activities:

. Have the students read New York City Streets, A Guide to Making Your Block More Lively and More Livable, Mary Grozier and Richard Roberts, Council on the Environment of New York City, New York, 1973.

FOLLOW-UP TO UNIT B

Possible Beautification Projects

1. Have a fair and invite area artists to produce and exhibit art work with an environmental theme. e.g., sculpture from objects found in the environment, plans for a street re-design, drawings or paintings of environmental pollution problems for public awareness.

2. Have neighborhood schools, storeowners and community residents create and display art work.

3. "Adopt a Station" - beautification of a train or bus station.

4. A student tree corps (children and adults) to care for local street trees, planting a community vegetable garden or a flower garden, etc. (see greening projects, Lesson 2, Unit B).

5. A street or park cleanup campaign involving store and home owners, etc., e.g., putting up window boxes, street and park sweeps, etc.

6. Landscaping of a school building or yard, etc.*

7. Outdoor wall murals by students and neighborhood residents.

Readings on Beautification and Open Spaces

Background to Environmental Planning, Fraser Reekie, Edward Arnold Publishers, London: 1975.

Centers for the Urban Environment, Survival of the Cities, Victor Green, Van Nostrand, Reinhold Co.: 1973.

The City People's Book of Raising Food, Helga and William Olkowski, Rodale Press, Inc., Pennsylvania: 1975.

City Streets, Mary Grozier and Richard Roberts, Council on the Environment of New York City, New York: 1973.

The Complete Book of Community Gardening, William Morrow and Co., New York: 1979.

Design in the Built Environment, Fraser Reekie, Edward Arnold Publishers, London: 1976.

The Language of Open Space, a glossary to help you say exactly what you mean, Dept. of Research and Planning, Duluth and U.S. H.U.D.: 1975.

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* See How to Start a School Gardening Program, Gardens for All, Inc., P.O. Box 2302, Norwalk, Conn., 06852, (203) 866-0771. Has excellent, applicable lesson plans on a step by step basis.

Lost New York, Nathan Silver, Schocken Books, New York: 1975.

Mural Manual, How to Paint Murals for the Classroom, Community Center, and Street Corner, Rogovin, Burton & Highfill, Beacon Press: 1975.

Our Man Made Environment - Book 7, Published by M.I.T. Press, the Group for Environmental Education.

Self Help Handbook, Karin Karlson, Citizens Committee for N.Y.C., New York: 1978.

Streets, Teachers Guide, Harwell Associates: 1976.

Towards A Peoples Art, The Contemporary Mural Movement, James Cockcroft, John Wever and Eva Cockcroft: 1975.

Urban Design as Public Policy: Practical Methods for Improving Cities, John Barnett, Foreword by John V. Lindsay, McGraw-Hill Publications, New York: 1974.

Urban Open Spaces - Cooper Hewitt Museum, The Smithsonian Institutions National Museum of Design, Library of Congress: 1979.

UNIT C: SOLID WASTE *

Introduction

The majority of this country's solid waste goes to landfills, many of which will close in the next ten years due to lack of space and because they are health hazards. Alternative garbage disposal methods are a pressing necessity. Incineration pollutes and is expensive, in part because localities are required by federal law to install pollution-control devices. Open dumping is outlawed in most places. Resource recovery appears to be the most economically and environmentally viable alternative to landfilling.

There are two basic approaches to resource recovery: high technology resource recovery systems and low technology source separation programs. Central to both technologies is the concept that much of what is thrown away is valuable either as recoverable energy or as recyclable materials.

Resource recovery plants recover metals and glass and convert organic wastes into energy. These plants, however, are expensive, take years to build, and there is a good deal of controversy as to whether they are suitable for all settings. These plants, too, require that a certain amount of garbage be generated in order for them to be economically feasible, thus reinforcing the creation rather than reduction of garbage.

Programs for source separation (the setting aside of recyclable materials in the home or workplace) can be implemented relatively immediately with minimal financial outlay compared to the capital needed to build a resource recovery plant. Such programs divert and market portions of the waste stream, reduce tonnage going to landfills, and cut municipal collection and disposal costs.

Tax credits and favorable shipping rates have perpetuated the use of virgin rather than recycled materials in this country over the past ten years. Because of the energy crisis, the growing awareness of the finiteness of natural resources, and the high cost of pollution in terms of health and dollars, much of what has been termed garbage in the past is now beginning to be viewed as a resource. In addition, there is the potential for jobs and new industry that can result from separating recyclable materials from the solid waste stream and transforming them into usable commodities.

Recycling saves energy that would be used in the collection and disposal of solid waste. Making goods from used materials is often more energy efficient and less polluting to our land, water, and air than creating these same goods from virgin materials. Reuse of materials saves natural materials.

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* Introduction adapted from New York City Garbage, Kim Elliman, Council on the Environment of New York City, 1979; "New York City Recycling Center" in Citizen Energy Information Packet, Mark Levy, Council on the Environment of New York City, 1978.

#1 Aim: To introduce the problem of garbage.

Motivation/Discussion:

a. Where does our garbage or solid waste come from?
   . Everything we do produces solid waste or garbage, e.g., eating, drinking out of cans, writing on paper, reading the newspaper, etc.
b. Most of this garbage is taken directly to landfills or is incinerated. Some is composted or recycled. Some finds its way to the streets where it becomes litter.
c. What creates the problem of litter?
   . Carelessness.
   . Negative feelings about the neighborhood.
   . Inadequate receptacles.
   . Excessive packaging.
   . The "waste ethic."

#2 Aim: To learn about resource recovery and source separation *

Motivation: Speaker and slide show from a local environmental group.

Discussion:

a. What are the materials that can be separated at home and taken to a recycling center instead of being thrown away as garbage?
   . Glass.
   . Aluminum.
   . Tin-plated steel.
   . Newspapers.
   . Some plastics and textiles.
b. What are some advantages of source separation?
   . Involves people.
   . Collected and cleaned materials have a higher sale value than mixed materials.
   . Makes money.
   . Reduced garbage loads for landfills or incinerators.
   . Saves energy, e.g., 6.5 Kilowatt hours for every pound of aluminum recycled.
c. What are some of the problems?
   . Takes time.
   . Storage, sale prices, and ability to sell vary with market conditions.
   . Only about 1 in 4 pounds of garbage is recyclable material.

* Information for lesson from "Stop Wasting Wastes," Eco-News, Vol.9 No.4, Environmental Action Coalition, New York, N.Y.: February 1979; also, "NYC Garbage Factsheet," Council on the Environment of NYC, New York 1979.

d. What do high technology resource recovery plants do?
   . Burn waste to produce energy.
   . Convert waste to produce energy.
   . Remove metals, glass, ceramics, etc. which can later be sold.

e. What are the problems associated with a high technology plant?
   . Requires guaranteed amounts of garbage thus discouraging conservation.
   . Burns materials which could be recovered, like paper.
   . Causes air pollution.
   . Has not been shown to be a totally appropriate technology for the U.S. yet.

Follow-up Activities:

1) Have students study the two basic resource recovery plant technologies that might be viable in cities -- waterwall incineration and refuse-derived fuel (RDF). Individual students or committees can explore each one and report back to the class.

2) Ask another committee of students to research composting -- the mixing and reusing of many waste materials as soil. See the Neighborhood Composting in New York City booklet by Douglas Daly and Liz Christy, Council on the Environment of New York City, 1978.

FOLLOW-UP TO UNIT C

Possible Projects

1) Anti-litter and cleanup campaign by residents and merchants on local streets involving sweeps, litter baskets, patrols, etc.

2) A school or neighborhood aluminum or paper recycling program.

3) Neighborhood composting operation in a park or lot.

4) Series of tours to resource recovery sites accompanied by workshops to educate citizens. Attempt to stimulate citizen attendance at community meetings and public hearings on solid waste issues, e.g., funding and location for resource recovery plant, leasing for a site for recycling storage facility, placement of litter baskets on an avenue, etc.

Readings on Solid Waste

Citizen Energy Information Packet, Mark Levy, Council on the Environment of NYC, New York: 1979, p.16.

Committee Findings and Staff Papers on National Beverage Container Deposits, (SW-733) Resource Conservation Committee, Washington, D.C.: 1979.

"Economic Feasibility of Recycling," Neil Seldman, Institute for Local Self-Reliance, Washington, D.C.: 1978.

Environmental Quality Management, Granville Sewell, Prentice Hall, Inc. New York; 1975, pp.219-256.

Multi-material Source Separation in Marblehead and Somerville, Mass. Composition of Source-Separated Materials and Refuse, Vol.III (SW-823) U.S. Environmental Protection Agency, Washington, D.C.: 1979.

National Conference on the Urban Environment, "Task Force Report on Solid Waste," Council on the Environment of NYC, New York: 1975, pp.85-90.

Resource Recovery and Source Reduction, Vol.1, Resource Recovery and Waste Reduction, Vol 3-4, Reports to Congress, U.S. Environmental Protection Agency.

Resource Recovery and Waste Reduction Activities, A Nationwide Survey (SW 432a), U.S. Environmental Protection Agency, Washington, D.C.: 1979.

Source Separation, The Community Awareness Program in Somerville and Marblehead, Massachusets, (SW-551) U.S. Environmental Protection Agency, Washington, D.C.: 1976.

UNIT D: WATER

Introduction

From sewage, industrial discharges, sewer overflows and street runoffs, from seepage and leaching and alterations of waterways come the oil, bacteria, viruses, chemicals, heavy metals, and other garbage that contaminate one of our most precious resources, water -- our lakes, streams, oceans, rivers, seas and underground waterways.

Many of the pollutants in our waters have not been identified. There are no discharge standards for most toxic chemicals and heavy metals, and little is known about the effects of man-caused concentrations of these chemicals and metals. It is thought that many pose a hazard to the food chain. Standard municipal treatment facilities are not equipped to remove chemicals and heavy metals; they use a biochemical process to remove suspended solids and organics which consume oxygen.

1) Primary water treatment is a mechanical process which removes 20-40% of both organic and suspended solids.

2) Secondary treatment, a biological process using bacteria to rapidly decompose organic wastes, removes 40-60% of organic and suspended solids.

3) Tertiary treatment uses physical and chemical treatment processes to further decontaminate the water.

The treated waste water is returned to a body of water; the remaining sludge from secondary and tertiary treatment must be disposed of either on land or in the water.

The quantity as well as the quality of the nation's water supply is an area for great concern. Largely in the West and South, dams have rerouted water and enabled agriculture and cities to grow in areas that without the new water could not have tolerated such growth. In older cities, water supply systems are critically in need of repairs, which will require large amounts of capital expenditures. Drought in some regions and inadequate supply in others make water an intense political issue.

#1 Aim: To understand where our water comes from.

Motivation: Have the students read "Water, the Essential Resource", National Audubon International Series #2, by Phillip W. Quigg.

Discussion:

a. Where is most of our water?
   . 95% of the world's water is in the oceans and unsuitable for drinking unless desalinated.
   . 4% is fresh water that is frozen in glaciers in the North and South Poles.

. Only 1% of the world's supply of water is potable.
. Most of this 1% comes from groundwater.

b. What is groundwater and why is it important?
. Rain and seepage from the earth's surface sinks into the ground forming underground reservoirs that collect water. This valuable underground water has taken millenia to accumulate and cannot be replaced immediately once it is used up.
. Ground water flows to the surface and supplies our lakes and rivers with water.
. Most of the water in our lakes and streams comes from this groundwater.
. If this underground water becomes contaminated our streams and lakes may be polluted for generations to come. There is no proven technology for cleaning up contaminated groundwater.

#2 Aim: To discuss the quality of our nation's drinking water.

Discussion: Some of our nation's water supply is dangerously contaminated.

a. What is causing this pollution?
. Sewage is the most common city waste. It contains garbage, wastes and water from bathing, laundry and other household debris; sewage carries industrial chemicals, oil and heavy metals such as lead and mercury. It also contains bacteria and viruses. Sewage comes from offices, business, industries, landfills and agriculture.

b. What are some of these pollutants?
. Phosphates, nitrates, pesticides, detergents, heavy metals, solvents, PCB's (used in transformers and capacitors -- found in light fixtures!), DDT, and chlorinated compounds.

c. What are some of the problems associated with chemical pollutants?
. Many of these pollutants have not been identified.
. Lack of standards for toxic and hazardous chemicals.
. The effect of large concentrations of man-made chemicals is unknown.
. Pollution endangers human health and spoils recreation.

d. What can be done about some of these problems?
. The federal, state and city governments can create and enforce laws which regulate waste disposal.
. Industry can be encouraged to pre-treat its wastewater.
. Communities can organize local cleanups.
. Water treatment plants can be upgraded.

e. What is sludge?
. The solid matter that settles to the bottom, floats or becomes suspended in the sedimentation tanks of the treatment plants, and must be disposed of by filtration and incineration or by transport to appropriate sites. Sludge is composed of solids and is 95% water. Reducing the amount of water wasted would reduce the amount of sludge.

f. Can sludge dumping endanger our land and water?
. Yes, if the sludge is contaminated.

Follow-up:

1) Have some students research the diseases caused by chemical and heavy metal pollutants. Have the students bring in household products containing these substances.

2) Have a committee of students research and then report to the class on the water quality of inland waterways, lakes and streams in their town or city. The students can contact the local environmental protection agency and/or civic or private organizations dedicated to preserving/improving the quality of these waterways in their town. These organizations would be supportive and helpful to students doing research or to organizers hoping to start local cleanup projects.

3) Other possible areas for research could be:
   a. The topic of groundwater.
   b. The sewer system and its relationship to water quality.
   c. An investigation of new sources of drinking water.
   d. An investigation of how water pollution relates to air pollution, the automobile, etc.
   e. A more comprehensive and technical exploration of waste purification systems can be launched by interested students.

FOLLOW-UP TO UNIT D

Possible Projects

1) Water tributary (or any body of water) cleanup campaign involving community residents. Hold weekly waterway cleanups by removing the trash along the water edge. Workshops on water quality and beautification could supplement the cleanups.

2) Have students research and develop a plan for sewage treatment plant development in the area; study cost, placement, size, number of plants, etc.

3) Water Conservation Program: (see Energy Conservation Unit A, Lesson 5)
   . Students can check for water wasted in the home, school and community. They can secure educational materials from environmental organizations. They can give workshops and slide shows and record blocked sewers, open hydrants, and other water leaks in the community.
   . Ask students to research those areas of the United States, e.g., the Southwest, where intense struggles over water supply rights have developed.
   . Ask students to devise political and ecological strategies to resolve these conflicts.
   . Develop an environmental game in which students take on the roles of different "players" in the conflict.

Readings on Water

Environmental Protection Agency Publications: Washington, D.C.
- Protecting Water, October 1978.
- A Guide to the Clean Water Act Amendments, Nov. 1978.
- The Public Benefits of Cleaned Water
- Emerging Greenway Opportunities, August 1977.
- A Primer On Wastewater Treatment, July 1976.
- Clean Water: Understanding the Law, 1978
- Research Summary: Oil Spills, 1979.

Clean Water It's Up To You!, Isaac Walton League of America.

"Nation's Water is Bountiful, But Supplies are Squandered," Robert Reinhold, New York Times, August 9, 1981.

Enemy of the People, Henrik Ibsen.

UNIT E: AIR

Introduction *

Air pollution can come from dust storms, tree pollen, fires, and volcanic action. Most urban air pollution, however, comes from man-made sources -- automobiles, industry, and electric power plants. In the United States, mobile sources such as cars and trucks discharge 50-60% by weight of all airborne emissions. In many cities the most significant source of air pollution is the internal combustion engine! Motor vehicles are responsible for roughly 75% of the carbon monoxide, 60% of the hydrocarbons, and 40% of the nitrogen oxides in the U.S. The continued burning at the present level of oil, gas, coal, and other fossil fuels ensures a continuous and significant level of air pollution in the U.S., at least for the near future.

The main air pollutants are carbon monoxide, sulfur dioxide, nitrogen oxides, ozone, particulates, and hydrocarbons. These pollutants irritate the eyes and nose, erode buildings, and threaten human health. While there are controversies over the extent and effects of air pollution on health, researchers have found a statistical relationship between air pollution and mortality.

Yet air pollution control is a controversial issue. Clean air standards affect land-use, economic growth, industrial location, and transportation modes, and vice versa. Industries and power companies feel that air standards restrict growth. Less pollution regulation would result in a more prosperous economy and in the use of a cheaper, more abundant fuel source such as coal or high-sulfur oil. Environmentalists point out some of the real costs of polluted air -- hospital visits, illness-related work absence, poor health.

#1 Aim: To learn about the sources and types of air pollution.

Motivation: Speaker from a local environmental agency to present an overview of problem.

Discussion:

a. Do you think most of our urban air pollution comes from natural or man-made sources?
b. What are the major man-made sources of air pollution?
   . Motor vehicles, e.g., cars, buses, taxis, trucks.
   . Power plants and industrial facilities which burn oil and coal with inadequate emissions control devices.
c. What are some naturally caused pollutants?
   . Dust storms.
   . Tree pollen.
   . Fires.
   . Volcanic action.

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* Adapted from New York City Air, Kim Elliman, Council on the Environment of New York City, 1979.

d. What are the main air pollutants in the U.S. and what are their major sources?

Table 1. Estimated pollutant emissions in the United States 1970 through 1977 (millions of metric tons)

Year	Suspended Particles		Sulfur Oxides		Nitrogen Oxides		Hydrocarbons*		Carbon Monoxide		Total
1970	22.2	11%	29.8	15%	19.6	9%	29.5	15%	102.2	50%	203.3
1971	20.9	10%	28.3	14%	20.2	10%	29.1	15%	102.5	51%	201.0
1972	19.6	10%	29.6	14%	21.6	11%	29.6	14%	103.8	51%	204.2
1973	19.2	10%	30.2	14%	22.3	11%	29.7	14%	103.5	51%	204.9
1974	17.0	9%	28.4	15%	21.7	11%	28.6	15%	99.7	50%	195.4
1975	13.7	7%	26.1	14%	21.0	11%	26.9	15%	96.9	53%	184.6
1976	13.2	7%	27.2	14%	22.8	11%	28.7	15%	102.9	53%	193.8
1977	12.4	6%	27.4	14%	23.1	12%	28.3	15%	102.7	53%	193.9

*Volatile hydrocarbons only; methane and other nonreactive compounds omitted so far as possible.

National Air Quality, Monitoring, and Emissions Trends Report, 1977 EPA, December 1978

Table 2. Estimated pollutant emissions by source, 1977 (millions of metric tons)

Source	Suspended Particles		Sulfur Oxides		Nitrogen Oxides		Volatile Hydrocarbons		Carbon Monoxide	
Transportation (autos, trucks)	1.1	9%	0.8	3%	9.2	40%	11.5	41%	85.7	83%
Combustion (power, heating)	4.8	39%	22.4	82%	13.0	56%	1.5	5%	1.2	1%
Industrial processes	5.4	43%	4.2	15%	0.7	4%	10.1	36%	8.3	8%
Solid Waste (incinerators)	0.4	3%			0.1		0.7	2%	2.6	3%
Miscellaneous (fires, solvents)	0.7	6%			0.1		4.5	16%	4.9	5%
Total	12.4		27.4		23.1		28.3		102.7	

National Air Quality, Monitoring, and Emissions Trends Report, 1977 EPA, December 1978

Photo-chemical oxidants, of which ozone is a major example, are formed from the interaction of nitrogen oxides and hydrocarbons. The principal sources for both are motor vehicles. Since photo-chemical oxidants are secondary pollutants stemming from interactions of two of the primary pollutants listed, no percentages are included for them.

The pollutants listed here are gases which concentrate in our atmosphere at a certain height above street level. Non-gaseous pollutants like lead which concentrate at levels below the roof top settings of most air pollution monitoring devices, are not included yet can be extremely detrimental to human health.

e. What is the most prevalent pollutant in the U.S.?

. Carbon monoxide is dangerous to health and is the most prevalent pollutant in the atmosphere, making up over 50% of the nation's pollution.

Follow-up:

1) Ask a committee of students to research each major pollutant to find out its chemical characteristics and health effects.

2) Ask another group to devise strategies for lowering pollution levels, e.g., car pooling or increased use of mass transit to reduce automobile use; using emission controls on conventional power plants, etc.

#2 Aim: To learn about the health effects of air pollution.

Motivation: Speaker to give talk and slide show on air pollution sources and effects.

Discussion:

Using the information gathered in the follow-up section of the preceding lesson and any other explorations, have the class discuss each major pollutant and its health effects. For instance:

- Carbon Monoxide reduces the oxygen carrying capacity of the blood by reacting with hemoglobin. The shortage of oxygen affects the central nervous, cardio-vascular, and respiratory systems of the body in that order and can alter behavior, inducing torpor. It also causes heart pain in people with angina pectoris because the heart muscle leaks oxygen.
- Sulfur Oxide aggravates respiratory diseases and causes shortness of breath and eye irritation. People with asthma, chronic bronchitis, and emphysema are most susceptible.
- Nitrogen Oxide irritates and causes structural and chemical changes in the lungs. The gas lowers the body's resistance to influenza and other respiratory infections. Nitric oxides irritate the skin and eyes and its reactions with sunlight, air, and hydrocarbons form ozone.
- Ozone irritates breathing, causing coughing, choking, and impaired lung function.

Follow-up:

1) Ask the class to research the statistics of air pollution and health:
   a. Identify, and give statistics on, groups particularly susceptible to air pollution, e.g., those people with predisposing diseases, children, elderly.
   b. Estimate the statistical relationship between exposure to the pollutant and its effect on the susceptible population.
   c. Identify the areas and related percentages of pollution exposure, whether indoors or out, in the workplace or at home.

#3 Aim: To explore air pollution and the economy.

Motivation/Discussion:

Discuss with the class the argument that expensive hardware installed for emission control purposes has adversely affected the economy; that less environmental regulation would result in a more prosperous economy and use of cheaper, more abundant sources of fuel such as coal or high sulfur oil.

- Environmentalists point out that the costs of polluted air are considerable. The burning of coal or high sulfur oil might cause fuel bills to go down, but health costs and illness-related work absences would soar unless adequate pollution control devices are used.
- Sulfur dioxide, mixing with water in clouds, forms acid particles in rain which when precipitated corrode metals, stones and other materials, and pollute water.
- Gases like sulfur dioxide and carbon dioxide block sunlight and impair vegetable growth.

Follow-up:

- Have the class research types of pollution control equipment -- monitoring devices, scrubbers, devices on motor vehicles, etc. -- and the costs of each and determine how the cost of a specific piece of equipment compares with the health effects of not using it.

FOLLOW-UP TO UNIT E

Possible Projects

1) Monitoring air pollution, e.g., time of pollution incident, wind direction, description (smoke, odors) using simple charts prepared for this purpose. Consult local government environmental agency. Information to go to city officials as appropriate.

2) Monitoring of traffic conditions, e.g., number of vehicles, length of time vehicles emit particular fumes, etc. Data to go to local environmental agency.

3) An alternative transportation project in which citizens in a community, students and teachers in a college, etc., carpool and/or start using public transport to reduce auto use.

4) A campaign against smoking in public places.

5) Monitoring and presenting testimony at public hearings, community board meetings, etc. on the construction of new incinerators and their air pollution potential, on the need for new scrubbers in industrial plants, on the building of new highways which could increase air pollution, etc.

General Readings on Air

Acid Rain, U.S. Environmental Protection Agency: 1980.

Air Pollution and Your Health, U.S. Environmental Protection Agency: 1980.

Cleaning the Air: EPA's Program for Air Pollution Control, U.S. Environmental Protection Agency: 1980.

Environmental Quality Management, Granville Sewell, Prentice Hall, Inc. New York: 1975, pp.164-201.

Parallel Goals: Clean Air and Economic Development, U.S. Environmental Protection Agency: 1980.

Pollution: A Common Concern, U.S. Environmental Protection Agency: 1978.

Trends in the Quality of the Nation's Air -- A Report to the People, U.S. Environmental Protection Agency: 1980.

PART I

A D D E N D A

A. Noise *

Introduction

Screeching subways, braking autos, blaring sirens, roaring airplanes and overloud stereos are just some of the sounds of the city that may injure your health. Sustained exposure to loud noises can lead to permanent or temporary hearing loss. Exposure to excessive noise can lead to high blood pressure, ulcers, emotional problems, sleep disruptions and learning disabilities.

People need to be educated to the harmful effects of noise. Only then will they be willing to lower their radios and television sets and, in general, make less noise. Consumers could purchase goods that are less noisy and support manufacturers of quieter products. Companies could use tools that are quieter and could confine noisy construction to the waking hours.

Possible Projects

1) Have a group of students do a publicity campaign on the effects of noise pollution and how to reduce noise levels using the media, posters, flyers, etc.

2) Record, on a tape recorder, a low decibel, pleasant sound as the standard. Have a group of students take neighborhood tours to measure common city noises against the recording. Identify the sources of noise and the level of noise disturbance; take action to combat the noise,e.g., discourage loud radios, record license plates of noisy cars or motorcycles, write down subways that "screech" into the station, and submit results to local environmental and transit administration.

3) Highlight the "noise issue" via publicity,e.g., hand out earplugs to citizens to combat loud traffic or other noises; and write local media to cover the event.

For further information on the topic of noise, see these references used in preparing statement.

Some General Readings on Noise

Facts About Noise, U.S. Environmental Protection Agency: 1977.

Noise: A Health Problem, U.S. Environmental Protection Agency: 1976.

Noise and Its Measurement, U.S. Environmental Protection Agency: 1981.

Noise and Recreational Vehicles, U.S. Environmental Protection Agency: 1976.

Noise Around Our Homes, U.S. Environmental Protection Agency: 1980.

"Noise Factsheet," Council on the Environment of New York City: 1979.

"Noise," Thomas H. Fay, Ph.D., The Book of Health, American Health Foundation, 1981.

* Introduction by Professor Arline L. Bronzaft, Ph.D., Environmental Psychology, Lehman College, City University of New York.

B. Food Pollution

Introduction

Chemical and bacterial contaminants including pesticides, herbicides, insecticides, plant fertilizers and heavy metals are in the air, water, and land, and endanger our health. They threaten agriculture, commercial fisheries, dairy farms and cattle ranches.

In the process called bioaccumulation, small quantities of chemicals absorbed by plankton and insects are transferred in increasing concentrations up the food chain to fish, birds, higher animals and humans. Traces of cadmium and lead have been discovered in canned fish; and bacterial organisms found in polluted waters have been discovered in the intestinal tract of the human body.

Natural bacterial growth from food spoilage, from cooking under insanitary conditions and from improper canning or packaging of food products affect us directly. The accumulation in the human body threatens our health and well-being. The use of chemicals in both the food growth (fertilizers in soil, pesticides on plants) and preservation processes has further aggravated the food pollution problem.

At home, we can protect ourselves from some forms of food contamination by properly preparing and storing food, by cooking under sanitary conditions, purchasing food where and when possible without chemical additives, by washing fruits and vegetables before eating, and by avoiding bulging, leaking, rusting or dented cans when buying canned goods.

Possible Projects

1) A community vegetable garden for the growth of fresh food without chemical fertilizers.

2) Conducting nutrition workshops. Find a qualified speaker.

3) A farmers fruit and vegetable market for produce from local farms. Such a project will provide community residents with fresh produce and help stimulate local agriculture.

4) Organizing citizens to monitor additives, e.g., carcinogens in foods sold at local supermarkets, and to develop campaigns to remove certain food pollutants from the marketplace. Boycotts of certain known health hazards, e.g., frankfurters which contain nitrates and nitrites, can be organized.

See the following which were used as references for the introduction.

Readings on Food Pollution

Environmental Health Planning, U.S. Dept. of Health, Education and Welfare, Public Health Service, U.S.G.P.O., Washington, D.C.: 1971.

Environmental Science: Grade 9, Board of Education of the City of New York, Division of Curriculum and Instruction, New York: 1979.

Greenmarket: The Rebirth of Farmers Markets in New York City, Barry Benepe, Council on the Environment of New York City, New York: 1978.

C. Hazardous Wastes

Introduction

Throughout Part I, the topic of hazardous or toxic wastes has been ominously present, either by implication or direct reference. Toxic substances leach from decomposing wastes into underground water tables. Chemical wastes are poured into our waterways; nuclear wastes are created, stored, and shipped; and toxic byproducts from autos and industrial plants are emitted into the atmosphere. Hazardous wastes seem to surround us.

Modern chemical technology has been responsible for great strides in the American standard of living, but with an accompanying threat to public health. Some chemicals kill immediately, while others cause harm gradually over many years. According to the U.S. Environmental Protection Agency, chemical spills capable of inflicting environmental harm occur about 3,500 times each year, and more than 2,000 dumpsites containing hazardous chemicals are believed to pose threats to the public safety. Occupational exposure to carcinogens is believed to be a factor in more than 20% of all cases of cancer.

The problem is not just one of inactive waste sites, like Love Canal, nor is it confined to accidental spills. Each year, 8,000 to 10,000 new chemicals are introduced into use. Potentially hazardous compounds are linked to nearly every aspect of our lives — our food, our clothing, our shelter, our means of transportation.

Legislation to create a "Superfund" to help clean up chemical spills and sites was passed by Congress in December, 1980. Cleanups will be paid for from a trust fund financed mainly by industrial taxes on oil and certain chemicals.

School groups can be effective in bringing attention to hazardous waste sites in their community, and in organizing public support for a cleanup by local agencies or businesses.

Possible Projects

1) Organize citizens to appear at local hearings having to do with the cleanup of certain dumpsites.

2) Stress the issue by publicizing statistics showing the health effects of such dumps, e.g., the Love Canal studies, and conduct a teach-in on the issue.

Hazardous Waste Readings

A Look at the Future of Hazardous Waste Management in America, U.S. Environmental Protection Agency: 1980.

Citizen's Guide to Toxic Substances Information, U.S. Environmental Protection Agency: 1980.(Lists over 100 publications and audio-visual materials on toxic substances and related issues.)

Everybody's Problem: Hazardous Waste, U.S. Environmental Protection Agency: 1980.

Laying Waste: The Poisoning of America by Toxic Chemicals, Michael H. Brown, Pantheon Books, New York: 1979.

Superfund: What It Is, How It Works, U.S. Environmental Protection Agency: 1982.

The Toxic Substances Control Act, U.S. Environmental Protection Agency: 1980.

Toxic Information Series: PCBs, Asbestos, U.S. Environmental Protection Agency: 1980.

Waste Alert!, U.S. Environmental Protection Agency: 1979.

PART II

HOW TO ORGANIZE AN ENVIRONMENTAL IMPROVEMENT / CITIZEN PARTICIPATION PROJECT

UNIT A: THE RATIONALE FOR CITIZEN PARTICIPATION

#1 Aim: To learn why citizen participation is important.

Motivation/Discussion:

a. The benefits of citizen participation.
   - Political. Do people have more power in their community?
   - Social and Cultural. Do people relate better to each other and have a deeper sense of community pride?
   - Economic. Are community resources used more efficiently and equitably?
   - Personal. Do people tend to feel better about themselves?

Follow-up:

- See "A Democratic Awakening" by Harry Boyte in Social Policy, September/October 1979, Vol.10 No.2, 33 W. 42nd Street, New York.10036.

#2 Aim: To analyze local citizen participation.

Motivation: Each student should ask five people of voting age whether they voted in the last mayoral election and the last school board election. Also ask the same five persons how many school board meetings they attended in the last year and whether they belong to any community organization, e.g., block association, community garden, home owners association group, etc. Have each student record the results and pool the class findings.

Discussion:

a. From this small informal survey and from your own experience, do you think most people tend to participate in local elections, community organizations, etc.?
b. Do you think participation is encouraged in the community, city, and nation?
c. To really answer these questions, do a more formal analysis of participation patterns. Analyze the percentage of people of voting age (registered and non-registered) from the neighborhood who voted in the last mayoral election and in the last school board elections. The Board of Elections should have these statistics for each election district.
   - What about in the city or town as a whole?
d. Try to get statistics on the number of block or community associations in the neighborhood, borough, and city and the number of active members in each group. The local Planning Commission, Bureau of Statistics, or Chamber of Commerce may have such figures. The class should be divided into groups to do the necessary research.

Time Frame : 1 to 2 weeks. Lessons from Part I to be taught in the interim.

e. When the data has been collected the students should make a chart:

	% Eligible Voters Voting in:		% Blocks or Communities Organized	% Active Members In Block or Community Associations
	Last Mayoral Election	Last School Board Election		
Neighborhood/ Community				
Town or City				

f. What do the statistics show about participation patterns in these categories?

g. Was it easy to find adequate statistics, particularly on the block or community level? If you weren't able to find accurate statistics on this item, what might that indicate?

Follow-up:

1) Ask students interested in further statistical analysis to do similar research concerning participation in other elections, community organizations, public hearings, etc. Many kinds of data, e.g., census tracts, can be employed.

2) A particularly interesting although difficult analysis could be a comparison of various participation tendencies in different countries with different political systems. Data could be difficult to obtain and standards of comparison hard to develop but the results of such a study could be quite illuminating with respect to our society.

#3 Aim: To discuss the benefits of citizen participation in environmental improvement projects.

Motivation: Present the following facts to the class:

. The Environmental Protection Agency has officially categorized more than half of America's waterways as polluted.
. The U.S. with 6% of the world's population uses 33% of the world's energy in one year.
. The cancer rate in New Orleans, near which a great deal of asbestos was dumped into the Mississippi River (the source of drinking water for New Orleans) is 5 times higher than the average American city.

Discussion:

a. From our readings and discussions on the urban environment, can we make any general statements about the condition of the environment in the U.S. at this time?
b. Are air and water pollution, energy waste, housing deterioration, "the garbage time-bomb", etc., problems that citizens have to deal with? (Students will probably have studied some lessons from Part I already).
c. Are environmental issues significant enough to warrant citizen action to effect change?
d. Do you think there is a great deal of citizen participation in important environmental issues at this time?

Follow-up:

Have the class read State of the Environment 1982, A Report from the Conservation Foundation, 1717 Massachusets Avenue, NW, Washington, D.C. 20036.

#4 Aim: To explore organizing as an appropriate and effective means of motivating ongoing participation.

Motivation: Have students read case studies on organizing from Alinsky's Reveille for Radicals, pp. 101-131, 159-189.

Discussion:

a. Would situations change for the better if people didn't organize themselves for change?
b. In order to change behavior, e.g., motivate people to stop littering, do you think more "passive" approaches such as publicity campaigns involving TV and radio ads and the like are usually effective? To what extent?
c. Why might a citizen group organized around a particular issue be effective in causing positive change?
d. Do you think organizing citizens to participate in environmental activities in the community is necessary? Can it be effective? What environmental issues do you feel are most important?

Follow-up:

Choose an environmental improvement campaign to organize and research the best strategy. For example, through interviews with members of organizations in the anti-litter field (e.g., Sanitation Department, civic organizations, non-profit environmental groups) in your town or city, have a small group of students study the basic strategy of a local anti-litter campaign:
a. What areas should be targeted?
b. What methods are best to use?
c. What positive services can be offered?
d. Is intensive field organizing necessary?

UNIT B: NEEDS ASSESSMENT AND PROJECT SELECTION

#1 Aim: To learn to assess the needs and problems of our community.*

Motivation: Demonstration on conducting community surveys by a representative from local planning department.

Discussion:

a. What methods can you think of to use to find out the environmental problems in the community?
b. Make a list based on:
   . Our own observations.
   . Informal discussions and interviews with friends, community residents, storeowners, etc.
   . Formal interviews with storeowners, community board members, leaders of civic groups.
   . Formal questionnaire distributed through random sampling of the community.
   . Analysis of census data, planning board fact sheets and guide books.
   . Formal, extensive community survey.
   . Sociological techniques like behavioral mapping to assess current uses of a particular space.
c. What factors should be considered in choosing a method of assessment?
   . Time required for project development.
   . Instruments available to organizing group.
   . Size of organizing class and experience in doing such work.
   . Surveys and studies that have already been done.
d. Select an assessment strategy with the group. If time, group size, and assessment experience are problems try to use already existing formal studies of area problems.
   . The observations of the group, teachers, and administrators in the school, supervisory personnel related to the organizing program, and key community groups, can complement any surveys or statistics that are already at the group's disposal.

Follow-up:

1) Do a role play interview with some members of the class to demonstrate an organizer/interviewer trying to question a storeowner or school board member on the key environmental problems in the community. Use question sequence from formal survey or questionnaire.

2) Ask some of the organizers to conduct interviews with storeowners or school board members, or some citizens in the area, to assess neighborhood needs and problems.

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* Community hasn't been defined very specifically in any of the lessons. It's up to the organizer supervisors and group to specify the boundaries which demarcate the "community".

#2 Aim: To consider other necessary factors in choosing a project to be organized.

Motivation: From our analysis so far, make a list of the major environmental problems facing our community.

Discussion:

a. The items on the list might be:
   . Litter on the street and in parks.
   . Inadequate transportation.
   . Garbage disposal.
   . Park deterioration.
   . Noise.
   . Traffic congestion and safety.
   . Need for beautification of public spaces.
   . Price of oil and gas; need for energy conservation.
   . Water quality.
   . Air quality.

b. What group or groups would be best to involve in projects related to these problems?
   . Senior citizens.
   . School children.
   . Other youth groups, e.g. scouts.
   . Storeowners.
   . Tenants.
   . Trade associations, merchants' associations
   . Churches.
   . Parent organizations.
   . Etc.

c. Where should we start organizing our projects, i.e., what should be our initial base?
   . A school.
   . A community group.
   . A service facility, e.g., hospital.
   . A combination of groups.

d. In what particular geographic area of our community should we start our project?

e. In considering the potential project idea, groups to be involved, area and base to organize in, what other factors should we consider?
   . What kind of outreach potential in terms of quantity and quality of participation does each problem area, group, location, organizing base offer?
   . What is the potential for a lasting project?
   . What is the funding potential?
   . What are the time limitations for each set of possibilities in terms of securing cooperation and permission of local authorities and actually carrying out the project?
   . What kind of immediate and long term environmental effect will the project have? Will the general environmental issue the project relates to be emphasized?
   . What will the educational value of the project be to both student organizers and the community?

f. In pooling all these factors, information from the assessment should be considered essential.
g. Ask the class to suggest specific projects which combine the factors discussed. For example:
   . An anti-litter campaign on a major thoroughfare involving students of all ages, storeowners, senior citizens, etc.
   . A beautification program to involve all citizens in a new design for a local park.
   . An energy conservation program for homeowners.
   . A tree planting and horticultural program for neighborhood residents in a local park.
   . An aluminum recycling program in a local high school and its feeder elementary and junior high school.
   . See other possible projects in each section of Part I.

Follow-up:

Ask the class to contact some key community groups, schools, etc. and to get feedback on the projects the organizing group is considering.

#3 Aim: To decide on a project.

Motivation: Group meetings with members of local community groups to discuss possible project ideas.

Discussion:

The organizing class and the community support groups should come to a decision on one or more projects to organize from the ideas being considered. In making the decision, data from the assessment should be brought into the discussion whenever possible. All factors mentioned previously should be considered.

The time frame is important. You can either choose a project that can be accomplished in one semester or one that will take longer if you are reasonably confident that other students will be agreeable to carrying on where former students left off. It has been the experience of the Council on the Environment of New York City that long-term projects work well and that students were eager to work on ongoing projects, as well as initiate new ones.

N.B.: Each class or group will be working on its own particular project. However, for simplicity's sake, most of the specific project references in the following lessons refer to the Kings Highway Anti-Litter campaign organized by Brooklyn College and Madison High School students in New York City between 1979 and 1982.

UNIT C: PROJECT PLANNING AND INITIAL FIELD ORGANIZING

#1 Aim: To determine what resources we need to begin the project.

Motivation/Discussion:

a. Besides what we've heard so far what other factors do we have to consider in planning the project?
   - What is the capacity of the target groups -- school, senior citizens, community groups, etc. -- to obtain or reproduce the needed materials?
   - If not through target group, how can we obtain these materials?

b. What initial participation strategies (e.g., workshops, events, meetings, block parties, etc.) are we considering and what resources are needed?
   - Mailing lists.
   - Slides.
   - Posters.
   - Flyers.
   - Newspaper and radio advertising.
   - Books, articles, other data for workshops.

c. Prepare a general project strategy/resource chart for dates, resources, participation goals.

For example:

Anti-Litter Campaign Project Strategy

PROJECT STRATEGY/RESOURCE CHART

GOALS	METHODS	RESOURCES	WHERE AND HOW OBTAINED	TIMING
General: Clean up Kings H'way	General: Involve all citizens in the area in the cleanup campaign	Brooms & Shovels	Sanitation Dept. loan	First six Months of Project:
		Bags	Fast Food Chain Donation	Goals 1 & 2
Specific: 1) Conduct monthly, then weekly sweeps. 2) Place garbage cans along the Highway. 3) Prevent litter through other forms of citizen participation.	Specific: 1) a. Organize students, youth groups, senior citizens, storeowners to conduct sweeps. b. Involve tenants and other citizens in the sweeps. c. Evolve a citizen rotational system for doing monthly, then weekly sweeps. d. Motivate businesses and storeowners to "adopt-a-can." 2) a. Develop a citizen "litter watch." b. Give workshops to storeowners.	Flyers	Prepared in-house	Method 1
		Posters	College/ High School Art Dept.	
		Garbage Cans	Needs fund-raising campaign	Next eight months of project:
		Pamphlets	Local environmental organization	Goal 3
		Speakers for Workshops	Local environmental or civic organizations	Method 2
		Mailing Lists	Local planning and community organizations	
		Etc.		

d. As the project unfolds such a general chart can made much more specific and quantitative with numerical goals for participation and specific dates.

e. If more than one project is being organized, the class can be divided into the appropriate number of organizing groups. It is not advisable with a beginning group to attempt more than 2 projects.

Follow-up

1) Start to think about and discuss dividing the organizing group for each project into subcommittees to begin carrying out the needed tasks. A possible division of functions would be:
   a. Publicity and graphics,
   b. Fundraising,
   c. Administrative coordination and evaluation (includes statistical and photographic documentation),
   d. Organizing inside the school,
   e. Field organizing.

2) Ask the students to think about which subcommittees they would like to be on. Give a general description of what each might deal with. (More specifics will be discussed as the next activity begins).

3) Have the students think about whether a specific "tactic" is necessary to motivate people to participate in the initial strategy, or to gain attention for it, e.g., piling litter high on a street corner to draw attention to the litter issue and gain attention for a sweep, or handing out earplugs to citizens in a noisy section of town to highlight noise problems. Such tactics may or may not be essential in this kind of project organizing, depending on the nature of the community, the project, etc.

4) Keep in mind that many of the organizing functions overlap and can be performed by any of 2 or 3 sub-groups.

5) If college students are supervising high school organizers, each college organizer-supervisor should be assigned a group to coordinate.

#2 Aim: To begin field organizing.

Motivation: Students attend a local planning board or department meeting.

Discussion-Experience:

a. The administrative committee should compile a list of key people on local planning boards, school boards, business organizations, etc.
   . Using such information students in the field organizing committee should make further contacts with the local planning board, school board, etc., and the appropriate committees to ascertain whether additional approval for the project(s) is necessary.
   . Also, the field organizing committee should make local political figures, merchant groups, block or community associations, etc. aware that project organizing is beginning and ask for their help.
   . Preparation for the initial participation strategies discussed should begin.

For example -- The publicity group should inquire about obtaining press lists and the possibility of having posters made by the school art departments. Local businesses might be willing to pay printing costs.

b. If the primary initial participation strategy, e.g., workshop or block party, hasn't been solidified from previous discussions then determine one or two key activities.

Follow-up:

Ask the students if they are satisfied with their sub-committee assignments, if the functions of each group are appropriate, and what changes are needed.

#3A Aim: To train students in the preparation of a press release.

Motivation: Short talk to the whole class by a publicity specialist from a local business, government or non-profit agency on the preparation of a press release.

Discussion/Experience:

a. Ask the class to prepare a short (one paragraph) introduction explaining the program and the initial strategy, e.g., a sweep-up.
b. Have some of the students read their paragraph to the class for critical analysis.
c. Stress the importance of explaining the purpose of the program, the date, time, place and initial activity in the first one or two sentences (see Note on Press Releases on page 46 and see model release on page 48 with comments attached).
d. Explain that while a press release is primarily for newspapers, radio and TV stations, it can be used as an introductory notice to any interested party.
e. Ask the publicity committee to use the discussion and paragraphs written by fellow students to prepare a release.
f. Ask publicity committees to put together a list of key newspapers, radio stations, etc.. Local planning boards, civic organizations (churches, schools) often have such lists. The group will have to determine whether local, citywide or wider-audience media should be included. Usually for smaller press a release should be sent 3 weeks ahead of the event; about 2 weeks is adequate for larger press. These time schedules relate to getting the paper or station to publicize the event prior to its occurrence. To get coverage on the day of the activity or a review after will require a release a few days before and a follow-up call the day before. In addition to the release, an editor's advisory (a short description of the upcoming event) is sometimes sent as well.
g. A follow-up phone call after release has been received urging the reporter to attend/cover the event and offering to meet with him or her and send additional material is an important part of effective publicity. Be brief and interesting on the phone and in your letters.

#3B Aim: To train students in the preparation of a flyer.

Discussion/Experience:

Go through similar steps as in mini-lesson 3A (see model flyer and comments attached on page 51) and then assign the preparation of a flyer to the committee.

Follow-up:

Show both the release and the flyer for critical analysis to the whole class.

#4 Aim: To develop a dissemination and contact model for motivating participation in the project's initial strategy.

Motivation: Make copies and hand out the dissemination/contact model on page 54.

Discussion/Experience:

a. Ask the students if they think the model is comprehensive, i.e., does it target the groups and specific contacts they want to involve in the event?
b. Ask the class to adapt this model to their current strategy and goals.
   - What groups do we want to involve in the initial participation strategy?
   - What specific contacts should we telephone and/or mail press release and/or flyers to?
   - Ask the class to suggest expansions of the model.
   - Quantify the model by estimating the numbers of people who will participate from each contact and group (see attached dissemination design).
   - Discuss the optimum number for participation in the initial strategy given the group's resources.
   - Refer to the Project Strategy/Resource Chart and update it by quantifying specific participation goals and the resources needed.
   - Discuss the development of an initial participation strategy with respect to the quality of the experience, i.e., what is the appropriate number of people to make a workshop or event effective, as well as meaningful and enjoyable to the participants?
c. Divide responsibility for making contacts and follow-ups between the in-school and field organizing committees.
d. Develop a timetable as to when contacts should be made.
e. Discuss with each committee and individual student their assignments and begin implementation of the strategy.

Follow-up:

1) Conduct role playing sessions for phone calls and field contacts with student organizers.

2) Conduct demonstration field trips in making personal contacts.

3) Involve student organizers from other committees besides the in-school and field organizing ones in role-playing and field demonstration activities.

4) All students will have to be involved in certain field experiences for manpower reasons e.g., posting flyers in the community, or preparing a mass mailing to media (local and/or citywide), and local organizations (schools, block associations, merchant associations, banks etc.).

5) If a mail strategy is employed (in many small area projects the phone and field approach is more direct and less expensive), conduct a separate session on the rationale for the strategy, the numbers to be reached, the anticipated response. The administrative committee should try to acquire and keep on file the necessary mailing lists and names of organizations who would insert the press release or flyer in their own mailings. See evaluation lesson beginning on page 71 for more specifics on the use of the mail as a participation strategy.

6) There will be a need for constant evaluation of the contact strategies, the outreach effectiveness of the dissemination model, and the personal interaction that organizers have with the people they are contacting. Frequent strategy sessions will be necessary.

#5A Aim: To train students in beginning fundraising techniques.

Motivation: Refer to the Strategy/Resource Chart and identify the areas where funding is needed (Some materials could be obtained directly from local organizations.).

Discussion/Experience:

a. After analyzing the chart, figure with the class the amount of money and resources needed for the project as a whole and the initial participation strategy in particular.
b. Develop a strategy to secure funding for the immediate participation activities. The administrative coordination committee can try to obtain free materials and literature. The fundraising committee can organize a cake sale, dance, etc. to get immediate funds. Other strategies could include a field trip to ask merchants to contribute to the project or to set up a booth at a local street fair with proceeds to go to the project.
   . Fundraising strategies should be discussed with the whole class as well as with the members of the administrative committee.
   . Specific dates should be attached to the various activities and goals for amounts of money and materials needed.
   . Determine with the entire class the long range funding needs and which fundraising activities have to begin immediately, e.g., applying for a booth at a fair to occur 3 months in the future.
   . The fundraising committee should research the upcoming fairs and events for money-raising potential and develop specific target activities to plan for and to match with the financial goals the class has established.

#5B Aim: To train students in the preparation of a fundraising letter.

Motivation/Discussion:

a. A fundraising letter is a key long range strategy. A good letter with appropriate accompanying material sent to appropriate organizations, in and out of the community, can raise significant amounts of money, particularly if followed up with phone calls and a meeting.
   . Have the fundraising committee prepare a letter (see model letter and comments).
   . As a training experience, have the whole class analyze the letter with help from persons on the administrative committee who are familiar with fundraising. The fundraising committee should prepare the final draft.

b. Have the fundraising committee target the organizations to be sent the letter after doing an analysis of local banks, corporations, small businesses, etc., that might help. Such an analysis should begin with the immediate community whose organizations are most likely to help and branch out from there to sources outside the area.

A NOTE ON PRESS RELEASES

Factors to Consider

1) Length - Most organizers, publicity specialists, etc., will opt for brevity but not at all costs. The first release (all releases written by students) shown here is a well written release that covers all information, keeps the reader's attention, and provides enough information for a newspaper to form an entire article around it or reprint it in its entirety. Certainly this release would be appropriate for reporters on the day of the event when they are on the scene; the second and shorter release would be better to catch the attention of a news desk so that a reporter may be assigned to the event.

2) Specific information - Whatever the total length, it is important that the release attract attention in the first paragraph by giving a direct, concise explanation of the main aspects of the event or project in question along with key information as to WHAT, WHERE, WHEN (date, time, description of event, exact location). The first paragraph should be a maximum of two sentences.

   The information will allow a news desk at a newspaper, or radio or TV station to quickly know whether the item is significant to them and whether coverage is possible. It also makes their job easier and allows them to more efficiently handle the large amount of news items that come across their desks. Such immediate information may motivate the recipient to read on.

3) Simplicity and Clarity - An essential point. The one thing a news desk will definitely not respond to is pompous, wordy writing.

Essentials for a Press Release

1. First paragraph must give details on WHAT, WHERE, WHEN.
2. Short sentences and paragraphs.
3. Name of contact person and how to contact him/her must be clearly in evidence.
4. Release date must be mentioned on top of the page, e.g., For Release: July 9, 1980 or FOR IMMEDIATE RELEASE (in which case, put the mailing date at the end of release).
5. All press releases must be double spaced for easy reading and editing.

Note on Other Types of Notices

It is possible to use a release as a general introduction notice to disseminate at workshops, meetings, through the mail, etc., to publicize the project in the community at large, if it has enough explanation. A tear-off slip could even be attached to the notice if the organizers wanted to elicit responses concerning attendance, further participation, etc.

Another approach would be to devise a separate introduction notice to be sent to schools, citizen groups, senior citizens to advertise the project and motivate initial responses. A tear-off slip could be added as a device to monitor initial interest and also as a record-keeping tool.

SAMPLE PRESS RELEASE #1

NEWS From CENYC

Council on the Environment of New York City

51 Chambers St., Rm. 228

New York, N. Y. 10007----566-0990

Marian S. Heiskell, Chairman

Lys McLaughlin, Executive Director

For Release: IMMEDIATE **Date:** April 30, 1982

Contact: Barbara Beise
566-0990

BROOKLYN YOUTH LEAD CLEAN-UP

Over 100 high school students, residents and merchants in two Brooklyn neighborhoods will conduct simultaneous street sweeps on Saturday, May 8, in a collaborative neighborhood improvement campaign organized by the students. Madison High School students will meet at 8 a.m. with residents of Midwood/ Kings Highway at Joyce Kilmer Square on East 12th Street and Kings Highway to sweep the Highway from Ocean Avenue to Ocean Parkway, while Lafayette High School students will gather at 9 a.m. with Bensonhurst neighbors in front of the Williamsburgh Savings Bank at 86th Street and 23rd Avenue to pick up litter and debris along 86th Street from 18th to 23rd Avenues.

The events are sponsored by the Council on the Environment of New York City (CENYC), the Community Education Action Coalition (CEAC), and Brooklyn College's Institute for the Study of the Borough of Brooklyn.

O V E R

Trained in community participation techniques by the Council, the students are working to develop neighborhood self-help projects like the street sweeps, recycling centers, energy conservation workshops and mural paintings. The students receive training in organizing from CENYC's Training Students Organizers program, instruction in urban issues from high school faculty, and work on field projects that they organize with local civic action groups like CEAC. The students also learn to interact effectively with city agencies such as the Parks and Sanitation Departments.

CEAC is a coalition of business, educational and residential interests working to involve youth in community improvement projects in Brooklyn.

The Council on the Environment of New York City is a privately funded citizens' organization in the Office of the Mayor which promotes environmental concern among New Yorkers and runs four programs to improve the city environment directly. These are the Training Student Organizers program, Greenmarket (farmers' markets), Open Space Greening, and the Office Paper Recycling Service.

DIRECTIONS TO SWEEP SITES:

BY CAR:
Midwood/Kings Highway Sweep (8 a.m.)
Belt Parkway to Ocean Parkway(E. 6th Street)
Ocean Parkway north to Kings Highway (9-10 blocks)
Right 6 blocks on Kings Highway
Bensonhurst Sweep (9 a.m.)
Belt Parkway to Bay Parkway Exit
Bay Parkway north to 86th Street, right on 86th to 23rd Avenue

BY SUBWAY:
Midwood/Kings Highway Sweep (8 a.m.)
D train to Kings Highway stop (E. 16th St.); 4 blocks to E 12th St.
M train to Kings Highway stop (local)
Bensonhurst Sweep (9 a.m.)
B train to 25th St. stop

YOUR COVERAGE IS INVITED.

# # #

U
A
B
P

UNITED ASSOCIATIONS FOR BEDFORD PARK
3025 Grand Concourse
Bronx, New York 10468
733-8350, 51

SAMPLE PRESS
RELEASE #2

NEWS RELEASE

Date: May 3, 1982 Contact: Sue Heller 733-8350
Mike Zamm 566-0990

FOR IMMEDIATE RELEASE

Bedford Park Community and Lehman College Students to Hold Second Recycling Day

The United Associations for Bedford Park (UABP) and students in the Lehman College Environmental Management Program (part of the Geology and Geography Dept.) will conduct a Recycling Day on Saturday, May 15 at Jerome Avenue and Bedford Park Boulevard from 10 a.m. to 1 p.m. (Raindate Saturday, May 22).

This event is a followup to the first Recycling Day organized in the community in November, 1980 and to sweep-ups coordinated along the Boulevard in 1979-80. Recycling Day-II will be part of the Bedford Park Beautification Day being held on the 15th.

Bronx residents are asked to bring aluminum cans and newspapers to the southeast corner of Bedford Park Boulevard and Jerome Avenue. Proceeds from the sale of the collected recyclables will be used to fund a permanent recycling program in the Bedford Park community.

UABP and the Lehman College students are being helped in their effort to establish a permanent recycling and anti-litter program by the Council on the Environment of New York City (CENYC). The Council's Training Students Organizers Program teaches college and high school students to organize environmental improvement projects.

# # # #

FLYER

With Notes on Posters and Leaflets

Factors to Consider

1) Getting Attention - A flyer must have an overall design that draws the recipient to it. The flyers shown on pages 52 and 53, designed by college or high school students, are reasonably good. The graphics are attractive and fairly simple and there is some word or picture in each that serves as a focal point.

2) Information - The flyer should give key information concerning the event: date, time, place, raindate, requirements for participation, etc. Identification of all principal sponsors should be made and the name of the main program should be obvious.

3) Clarity - The two flyers shown here are good examples of the virtues of being visually clear. Flyer #1 has one large eye grabber -- the event title -- and the rest of the information is in only 2 other sizes of print, in order of importance. That is, first the viewer's attention is drawn to the title, which also tells "what"; then the viewer is told "where" and "when"; then the background information -- "why" and by "whom" is delivered.
   If the flyers are to be posted as well as handed out, they should be printed on a color of paper which stands out from the background: gold, neon-green, bright pink, etc. Avoid black-on-white flyers. Black letters are readable.

4) Size - Usually flyers are 8½" by 11" or 8½" by 14" (or larger) and can be posted, handed out, or sent through the mail. Larger flyers are best for posting.

5) Note on Posters - Posters are usually two to five times the size of a flyer and are posted for relatively long periods of time. The same balance of information, clarity and attractiveness has to be reached. Even if used in conjunction with flyers, leaflets and notices, posters must contain all basic information.

6) Note on Leaflets - A one page leaflet is virtually the same as a flyer although the leaflet may be folded so that the four sides contain more information than the flyer. If the leaflet is 2-4 pages, it is more like a pamphlet in that it will contain a great deal of information.

FLYER #1

EARTH DAY SWEEP

Where: Bedford Park Blvd. and Jerome Ave.

When: April 22nd 2:30pm-6pm

WE CORDIALLY INVITE YOU TO JOIN WITH US IN THE CELEBRATION OF EARTH DAY 1980. ON THIS SPECIAL OCCASION WE WILL HELP BEAUTIFY OUR ENVIRONMENT BY UNDERTAKING A SWEEP ON BEDFORD PARK BLVD.

PLEASE COME AND LEND A HAND.
IF YOU CARE EVERYONE WILL!

SPONSORED BY:

LEHMAN COLLEGE ENVIRONMENTAL GROUP

UNITED ASSOCIATIONS OF BEDFORD PARK

COUNCIL ON THE ENVIRONMENT OF NYC.

FLYER #2

H.E.L.P.

SPONSORED BY
JAMES MADISON H.S
BROOKLYN COLLEGE
COUNCIL ON THE ENVIRONMENT
MIDWOOD KINGSHIGHWAY
DEVELOPMENT CORP.
KINGSHIGHWAY BOARD OF
TRADE

CLEAN UP KINGS HIGHWAY

ON SATURDAY MAY 19TH, THE STUDENTS OF JAMES MADISON H.S. WILL CONDUCT THE 1ST SWEEP UP OF KINGS HIGHWAY. PLEASE COME OUT AND JOIN US. WE WILL START AT 8:00 A.M. WE WILL NOT HAVE ENOUGH BROOMS TO GO AROUND SO,

B. Y. O. B.
BRING YOUR OWN BROOM

WE WILL MEET AT THE PARK TRIANGLE, EAST 12TH STREET AND KINGS HIGHWAY

HIGHWAY **E**NVIRONMENTAL **L**ITTER **P**ROGRAM

RAIN DATE: JUNE 2

RICHARD PEPE

DISSEMINATION MODEL

A key part of the initial attempt to involve citizens in a project is the development of a formal process for securing participation in whatever initial strategy has been selected. Groups to be contacted, methods of contact (phone, mail, workshop), contact assignments for each organizer, etc. must be identified.

The dissemination model included here is drawn up by assignments for each organizer in a Brooklyn College-Madison High School project to organize a sweep-up as the initial participation strategy in an anti-litter campaign. The organizers are given assignments in two main target areas -- the students inside Madison High School and the community outside the school. The assignments inside Madison are speaking engagements with different clubs along with flyer dissemination and school newspaper publicity. The community assignments are also mainly speaking engagements with groups that have been identified as likely participants in the sweep-up on the day and date chosen. Distribution of flyers is also included together with a press release mailing and followup phone calls.

The dissemination model could be organized in several different ways -- by assignment, by groups to be contacted, by locality, by contact method, etc. Also the model should include some estimation of the number of persons who will participate from each method, group, etc., and a total estimate of participation. Then an accurate ordering of whatever materials are needed for the event can be made.

A more complete model could look like:

General target area	Groups to contact and contact method	Organizers assigned
A. Inside School	Sports Clubs Arts Clubs News Groups	
B. Community	Senior Citizens Storeowners Youth Clubs and Schools Media Political Contacts Press	

SAMPLE DISSEMINATION MODEL

Organizing Assignments: Sweep-up on Kings Highway

A. Inside Madison High School
   a. Give teacher a flyer and arrange to give a short 2-5 minute talk to club or team (Richard P. runs off flyers)
   b. Give sponsorship form. (Donna runs them off)

1) Richard P. - Glee club, band,orchestra, music club, art squad, girls' basketball, tennis.

2) Richard L. - Softball, math, basketball, boosters, cheerleaders, twirlers.

3) Paula - Boys' basketball, football team, foreign language, encampment, law journal.

4) Donna - Chess, volleyball, Fidelitas, Arista, varsity, rocking horse five, bowling, golf, encampment.

5) David - Student union, SAF, moment, seekers.

6) Steve - Science, theatre arts, swimming club - boys' and girls', wrestling, soccer.

7) Irv - BOAC (School club).

8) Debbie - Track (cross country, indoor and outdoor, girls' and boys').

9) Mr. T - Third World Club.

10) Joel - * Will talk to Parents Association for funding and participation.

* In addition a flyer should be put in each official teacher's mailbox, and flyers go up on all bulletin boards; the Madison High School newspapers should have news release (get from Joe, Joel, or Mike); announcements should be made over loudspeakers on day of sweep. Mr. W. is a key coordinating figure in this.

B. Outside Madison

a. Call on phone, give them flyers, speak to groups if possible.

b. Also get all to sign petition and ask for funds where appropriate.

---

1) Girl Scouts - Paula.

---

2) Boy Scouts - Joe M. and Steven.

---

3) Young Christians - Joe M.

---

4) Senior Citizens - Joel.
   a. Kings Highway Center - Elaine: #627-7688 (Thursday at 1 p.m.) 250-300 seniors
   b. East Midwood Jewish Center - Sam: #377-3657 (every Wednesday)
   c. Greek Church - Church office: #ES7-2002

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5) Schools
   a. PS 197 - Mike Z.
   b. JHS 237 - Marcel.

---

6) Storeowners and larger business - One field trip; give flyer to all; post it.

   Storeowners - Ask them to participate; posters should also go up and funding for cans.

---

7) Media - Send news releases to all stations and newspapers on lists that Marcel and Joel have. Use CENYC lists too?

---

8) Politicians - Send letter and release to Mayor, Borough Pres., U.S. Congressman, State Assemblyman, State Senator.

---

9) Posting flyers in neighborhood (everyone) - OTB, banks, library, train station, bus station, supermarket.

---

10) Key community Associations - Send release and flyer; Mike Z. will send to 7 of them.

FUNDRAISING LETTER

Factors to Consider:

1) Thoroughness - A letter requesting funds must adequately explain the project in clear, concise terms, whether you explained the project to the person before or not.

2) Proper Length - A one page letter with an accompanying project description and any other relevant material like support letters and publicity, is advisable for all but the most simple projects. A budget must be included with the initial letter or in a larger proposal sent after the first contact has been made. A relatively long letter like the sample #3 on page 60 might be appropriate if the people being contacted are known to be receptive or in need of information.

3) Whether to Ask for a Specific Amount or Not - A letter might describe the project broadly and let the potential contributor choose how much to give to whatever aspect of the program they wish to support, as in the first sample letter. Specific requests for items with some background information may be made where appropriate, as in the second letter. However, the size of contribution is left open in these two letters.

   Sometimes it is advisable to request a specific amount of money or materials, while in other instances it is advisable to give an organization a listing of possible financial or material contribution alternatives to choose from. Investigation, either in terms of research into past preferences of the potential contributor or a phone inquiry can determine exactly how specific the group should get with respect to the contribution.

4) The Obvious - The letter MUST be correct grammatically, with no typos, and in a formal style that does not assume a contribution is forthcoming.

5) A Few Important Pointers -
   a. Make your requests for funds or materials early on in the letter;
   b. Call the person written to two weeks after the letter is mailed to inquire if material is satisfactory, and if you can come by and discuss the funding possibilities; and
   c. Offer to meet with the person you are writing to in the letter and to send additional material if necessary.

ON ORGANIZATIONAL LETTERHEAD

Name
Address

Date

Dear ----------:

On Saturday, May 19th, James Madison High School will launch Project H.E.L.P. -- The Highway Environmental Litter Program. Madison students and other neighborhood youth, store owners, senior citizens, etc. will sweep from East 16th Street to Coney Island Avenue.

I am writing today to ask for your help in this effort because Project H.E.L.P. needs financial and/or material contributions to make this effort a success. Funding is needed for garbage cans, bags, printed materials, mailings, etc.

The Saturday sweep-up will be the first of several along the Highway. H.E.L.P. hopes to have more garbage cans placed on the Highway at some time in the near future and have them serviced more frequently by the Sanitation Department. Community workshops, recycling teams, etc. will be a part of this ongoing program which is being coordinated by Madison High School and Brooklyn College student environmental organizers.

We would deeply appreciate it if you would consider making a contribution to our program. Such a gift would provide lasting support to our community since it would help build a financial base for an ongoing community participation-cleanup program which would involve citizens from all age levels and segments of our neighborhood. Thus not only a clean Highway but also positive democratic values, greater understanding between groups, less crime, etc., would hopefully be the results.

We would be glad to meet with you at your convenience to discuss our request and to provide any further information required. Thank you so much for your attention.

Sincerely,

Signature of Organization Representative

Name of Organization

SAMPLE FUNDRAISING LETTER #2

ON ORGANIZATIONAL LETTERHEAD

Name
Address

Date

Dear ----------:

On Saturday, June 16th, James Madison High School will launch Project H.E.L.P. -- The Highway Environmental Litter Program. Madison students and other neighborhood youth, store owners, senior citizens, etc. will sweep from Ocean Avenue to Ocean Parkway along Kings Highway in Brooklyn. OTB can be of real assistance by contributing some garbage cans to this effort.

The Saturday sweep-up will be the first of several along the Highway. H.E.L.P. hopes to have garbage cans placed on the highway and have them serviced frequently by the Sanitation Department. Community workshops, recycling teams, etc. will be part of this ongoing program which is being coordinated by Madison High School student environmental organizers.

We feel that the placement of these cans along the Highway will be a key element in the success of the Kings Highway anti-litter program. Both formal studies and discussions with community residents and storeowners indicate that the availability of the cans will prevent much of the street litter that occurs. The Madison student organizers have organized a petition drive to secure the agreement of the citizens in the area to have garbage cans put back on the Highway and to have them serviced regularly by the Sanitation Department.

The program is part of a special course in the urban environment taught at Madison High School with support from Brooklyn College and its Office of Neighborhood Affairs, The Council on the Environment of New York City, and a number of other community groups. Madison students are being trained in the skills of coordinating environmental projects: planning, publicity, mail and workshop techniques, evaluation, record-keeping, developing and maintaining citizen participation, etc. The course syllabus will include readings on various urban environment topics, e.g., solid waste, citizen participation theory and practice, and community development.

We would deeply appreciate it if OTB would consider contributing some garbage cans, or the funds necessary to purchase them, to Project H.E.L.P. The cans best suited to our area cost $15 each, and therefore some help is needed in order to obtain the twenty that we need. Such a contribution would provide essential material support to our ongoing community cleanup program.

We would be glad to meet with you at your convenience to discuss our requests and to provide any further information required. Thank you.

Sincerely,

Signature
Organization Rep.

SAMPLE FUNDRAISING LETTER #3

ON ORGANIZATIONAL LETTERHEAD

Name
Address

Date

Dear ----------:

On Saturday, June 16th, James Madison High School will launch Project H.E.L.P. -- The Highway Environmental Litter Program. Madison students and other neighborhood youth, store owners, senior citizens, etc. will sweep from Ocean Avenue to Ocean Parkway along Kings Highway in Brooklyn.

I am writing today to solicit your support. This will be the first of several sweep-ups of the Highway. H.E.L.P. hopes to have garbage cans placed on the Highway and have them serviced by Madison High students and/or other citizens with Sanitation Department cooperation. Community workshops, recycling teams, etc. will be part of this ongoing program which is being coordinated by Madison High student environmental organizers.

This effort is part of a special course in the urban environment to be taught at Madison High School with support from a steering committee (CEAC) made up of Madison, the Brooklyn College School of Humanities and the Office of Neighborhood Affairs, The Council on the Environment of New York City, and several other citizen groups and community organizations. Madison students are being trained in the skills of coordinating environmental improvement projects: planning, publicity, mail and workshop techniques, evaluation, record-keeping, developing and maintaining citizen participation, etc. The course syllabus will include readings on various urban environment topics, e.g., solid waste, and citizen participation theory and practice, and community development. It is hoped that other environmental projects will grow from the course and that the program will be part of an urban studies institute at Madison High School.

As the first community program emanating from the urban course, Project H.E.L.P. needs financial and/or material contributions to be a success. Funding is needed for garbage cans, bags, brooms, printed materials, mailings, etc.

We would deeply appreciate it if you would consider making a contribution to our program. Such a gift would provide a lasting support to our community since it would help build a financial base for an ongoing community participation cleanup program with an academic base which would involve citizens from all age levels and segments of our neighborhood. Thus, not only a clean Highway but also positive democratic values, greater understanding between groups, less crime, and other related projects, will hopefully be the results.

We would be glad to meet with you at your convenience to discuss our requests and to provide any further information required. Thank you so much for your attention.

Sincerely,

Signature of organization
Representative

FIELD INTERVIEWS

Organizing the project will require many kinds of personal contacts with all types of individuals and groups. Talking with storeowners, senior citizens, public officials, community board members, etc., will be a regular part of the organizer's work. Some factors to consider are:

1) Informal, spontaneous contacts to get a person's opinion or suggestions concerning an issue or event. Elicit participation in, or contribution to, a project, etc. This can be developed as long as the person's work is not interfered with: field interviews should not be undertaken during busy times of the day. Questions should be direct, brief, specific, and few in number. Several contacts should be planned for one time period so that organizing time is used efficiently, e.g., a field trip to ask storeowners for contributions to an anti-litter campaign. Key phone number, addresses, etc., should be noted. (See field trip sheet)

2) Those who work in more formal settings, e.g., business offices, local public offices, agencies or community service settings, should be contacted by phone and a meeting arranged at a designated time. An introductory letter preceding the phone call might be useful in some circumstances.

3) The organizer should have preliminary questions in his/her mind before each interview. If necessary a written set of notes can be used. Questions should be clear, specific, brief. The organizer should be direct with respect to any responsibilities he/she is asking the person to accept. Unless the situation is unusual, it is not advisable in the initial interviews to ask a person or organization to assume too much responsibility. As the discussion proceeds, notes should be taken if the organizer feels the person being interviewed is receptive. Both the organizer as well as the person or group being contacted should have a clear idea of the next step in the process before the interview ends, e.g., who will do what and contact whom.

SAMPLE FIELD INTERVIEW SHEET

Storeowner Response

Area Covered:

Team Leader: _____
Student Organizer: _____

Date:

Secretary: _____

Check if on our response list	Name of store or business	Name of owner, Key person, etc.	Phone and Address	Nature of Response

(If necessary, attach extra sheets.)

Number positive responses: _____ out of _____

Special notes or recommendations:

Future strategies:

UNIT D: PROJECT MONITORING AND ONGOING PARTICIPATION STRATEGIES

#1 Aim: To build a base of participation among citizens who become involved in the initial strategy, e.g., sweep-up, workshop, etc.

Discussion:

a. What would be a good way to maintain contact with people who attend or participate in initial organizing events?
b. Discuss possible methods, e.g., asking people to put their names on a mailing list or passing sheets around with a space for people to outline the kinds of activities they would like to be involved in.
c. Analyze with the organizing class the possible strategies for involving people in subsequent activities. In the case of an anti-litter campaign:
   . More sweep-ups on a regular basis (monthly, weekly);
   . Meetings with active participants, community leaders, etc. to discuss setting up litter patrols;
   . Workshops in properly tying and bagging commercial refuse;
   . Community and business support in purchasing and servicing garbage cans.
d. Some form of mailing with a tear-sheet should be sent to all initial participants to ask their preferences for involvement.
e. Initial participants who are on the mailing list should also be informed of upcoming events and asked to return a tear-sheet indicating whether they plan to attend.
f. Statistics should be kept on the number of responses to particular meetings to ascertain which lists, groups and individuals are participation-oriented. (See evaluation unit on page 71 for a more detailed description of mail analysis.) Statistics on participation should be kept, e.g., number of people from the different groups. This might lead to the development of a participation chart which would include percentages of participation by different groups in the program. (See attached recycling chart on page 65.) New goals for the quality and quantity of citizen participation should be established when necessary.
g. A special phone campaign with accompanying field visits should be made to contacts and organizations who represent key groups in terms of outreach to let them know about upcoming happenings, e.g., a second sweep, and to elicit their input into strategy development.
h. Community meetings to discuss the directions the campaign program might take will establish the beginnings of a citizen decision-making structure.

Follow-up:

Since the goal of any organizing group is eventually to have the program coordinated and managed by the community it is serving, the organizing group, over time, has to try to establish ongoing structures in the community, e.g., a leadership structure, divisions of responsibility, an organization.

Long-term structure of a program is complex and will involve the efforts of many people in addition to the organizing class. The students should be made aware of this.

A long-term organization should, in addition to having a formal structure, involve as broad a spectrum of community residents as possible -- ethnic, economic, age, etc. The organization should also try to become a multi-issue organization, e.g., start with anti-litter and branch out to other environmental projects and issues, and possibly to other community concerns.

CEAC -- Community Education Action Coalition, mentioned in the introduction, is the organization developed to formalize and extend the Brooklyn College-Madison High School student efforts referred to in this curriculum. CEAC now has several project service committees -- Sanitation, Energy, Environmental Arts, and is applying for non-profit and tax-exempt status.

PS 3 Class Recycling Results *

For Recordkeeping and Evaluation

CLASS: Freilich/209 MONITOR: Adem MONTH: February 1999

NAME	1/25	1/26	1/27	1	2	Week Total	5	6	7	8	9	Week Total	12	13	14	15	16	Week Total	19	20	21	22	23	Week Total	26	27	28	1	2	Week Total	Month Total
Andrea Bendewald	21	-	-	-		21	-	13	-	-	-	13	(	--		-	25	45 0		—	7			7	3/4	25	4	2			35	79
Alison Au	3	-	7	-	3	13	76	-	2	-	2	80	-	28	14	-	9	45		-	3	4		7	-	4	1			1	146
Julia Baker	1	3	4	3	1	12	7	18	8	1	-	34		10	7	8	11	30		-	36	26	9	71	35	9	-	38		82	193
Aaron Belen Master Stating	1	-	-	-	-	1	-	-	-	-	-	0		-	-	-	-	-		3	/			3	-	12	26			38	340
Amos Brown	1	4	5	1	-	58	-	-	-	38	-	33		--	-	—	-	-		/	3	2		3/4	3	-	1		-	7	101
Scott Jeffrey	45	55	40	67	43	258	2	6	1	1	3	13		62	-	3	1	16		4	1	1	1	7	8			-	--		307
Nicole Kastner	-	5	1	1	-	7	33	-	-	1	-	34			-	—	1	1		4	1	-	10	15	-	-	1		-	1	59
Rachel Shirley	-	9	4	1	-	14	3	7	-	-	-	10		--	-	—	-	-		1	-		1	2	-	-	20			20	46
Rachel Bayer Master Silja	-	6	6	-	-	12	-	-	-	-	-	0			-	—	-	-		-		1		1	-	-			-	0	13
Alaina Carrington	-	7	9	32		48	-	-	-	-	15	15 0		-	-	-	10	10		-	30 2	2		20/2	22	9	8			39	134
Nora Lobitzke	-	12	-	13	-	25	-	-	-	-	-	0			--		-	-		/				0	-	-	-	-	-	0	25
Tyson Mann	-	3	1	-	1	5	-	1	-	-	-	1			-		—			/	-	6	1	7	-	6	-	-		6	20
Kinsey Rigby	-	4	4	-	--	13	-	-	-	-	-	0					—			/	/	/		0	-	-	-	-	-	0	13
Chiara Romano	-	4	14	-	11	14	46	-	-	-	-	46			--		—			/	-	21		21	-	\	-	-	-	0	101
Lacey Olson	-	-	14	-	--	14	-	-	-	-	-	0			--		—			/	-		4	4	-	-	-		-	.	18
Celena Ortala	-	-	7	-	-	7	-	7	-	-	-	7			--		--			/	/			0	-	50	-	-	-	50	64
Aaron Miller	-	-	23	-	-	23	-	-	-	-	-	0			--		-			/	-			0	-	-					23
Jeff Burns		-	36	20	-	56	-	-	-	-	-	0								/	-			0	-						50
Michelle Hamptin			3	-		3	-	-	-	-	-	0								/	-			0	1		-	-	-	1	3
Rick Nam				14		14	-	-	-			0			1	-		1		/				0	-						15
Carlonia Breathat	-	-	-		-	-	1	-	44	3	6	54		12				12		/		6		7	-						73
Lara Ratzloff Master Dellis							-	4	-	-	8	12								/	11 4			1 3	-						214
Teacher Comm CLASS TOTALS	72	112	169	84	58	632	168	66	55	44	34	367		155	47	11	31	96			5			317	90	45	60	38			1707
Jane Lyle						632						367						114			114						13				

* Number of cans.

SPECIAL FOLLOW-UP TO UNIT D

A. Note on Workshops and Group Presentations

1. Student organizers can be trained in giving a workshop or other presentation to a community group especially if the presentation does not require that the speaker have a technical knowledge in an area, e.g., a presentation giving the overview of an anti-litter program or a workshop showing storeowners how to properly tie their garbage. Organizers should first be given the opportunity to observe experienced workshop leaders in action. In those structures in which college students or graduate students are supervising high school students, the college organizers can be trained initially and then help the high school students with their presentation techniques.

2. Key factors in giving a workshop or group presentation:
   - Brevity and Clarity - The presentation should be short and to the point;
   - Visual Materials - If possible some visual materials should be used, e.g., slides, film strips, posters, demonstrations to reinforce whatever points are being made and to keep workshop participants interested and motivated;
   - Time for Questions - There should be time for questions and answers to get suggestions on project development, feedback on the workshop, and to encourage citizens to participate;
   - Active Involvement - Whenever possible, workshop participants should be actively involved either through use of "hands on" materials or through discussions, role playing, etc.;
   - Future Steps - The workshop participants should be left with some alternatives for action in the immediate period after the presentation. Notices might be handed out with a tear-off slip giving citizens the opportunity to sign up for a sweep-up or litter patrol or to communicate with the organizing group in the future.

B. Meetings

1. Organizers will also have to attend numerous meetings of all types with the organizing group and its administrative structure and sub-committees, with official groups who might have jurisdiction on whether a particular project is allowed to develop in a community, and with participating citizen groups. These meetings might be for planning purposes, to do actual material preparations, to develop strategies for participation, or to analyze previous events. Organizers coordinating a meeting should take note of a few points:
   - Agenda - For most situations an agenda should be prepared which will give those who attend a meeting some structure for discussion. An agenda should be brief to center concentration on particular issues. If accompanying information is necessary, it should be included after the agenda page. See examples of two agendas of short and medium length.
   - Minutes - Some participant at the meeting should take minutes. The minutes should cover the essential items discussed at the meeting, and need not be a verbatim transcript. The minutes should be sent to all those at the meeting and all who were not able to attend but who are concerned. A book with all the minutes should be kept as a record of

the interactions and as an information source for citizens, public officials, etc., who may become involved as the project and organization grows.

- Structure - It might be advisable to develop a definite structure for meetings. Different members can serve in the various roles (chairman, secretary, etc.) either on an elected term basis or simply through rotation. If a group is meeting on a one-time basis or infrequently, roles can be appointed at the beginning of each meeting or it may be more feasible to conduct the meeting with only a leader to help the proceedings along.
- Length - Keep meetings as short as possible. Set a time limit maximum (maximum two hours in most cases) and stick to it. Start meetings on time to promote promptness.
- Attendance Sheet - Have participants write their name, address and phone number on the attendance sheet. Such information is useful for mailing lists and phone contact.

SAMPLE AGENDA #1

Kings Highway Anti-Litter Campaign

Agenda

Madison High School
March 23, 1979
3:30 p.m.

I. What's Happened So Far. Short summary.

II. Problems to Solve

A. Publicity
- Posters
- Cans
- News Release
- T-Shirts

B. Garbage Cans
- Availability
- When available
- What type
- Servicing

III. Immediate Future

- Beginning of Campaign
- Service and pickup schedule
- Get release together

SAMPLE AGENDA #2

Community Education Action Coalition

Agenda

Madison High School
March 9, 1980
2:30 p.m.

I. Curriculum Planning and Structure of Urban Studies Class

. What's happening and what's being planned.

II. Brooklyn College Students

. Summer Urban Institute Participation.
. Other Plans.

III. Structure of CEAC

. Community Board.
. Board of Trade.
. Role of Development Corporation.

IV. Projects

A. Anti-litter campaign
. Sweeps once a week? When start? What preparation needed?
. Cans -- pilot program with 6 cans.
. Senior Citizen block watcher.
. Funding -- Con Ed, BUG, others.

B. Environmental Arts -- Beautification
. Adopt A Station.
. Triangle Parks.
. Murals -- Select A Site/Select A Mural.
. Sculpturing Found Objects.
. Madison Beautification Program.
. Target groups -- Senior citizens, others -- make contact with them.
. Functions -- Who does what in environmental arts -- organizing project.
. Expansion to Bed-Stuy and other areas.
. Decision-making process -- involving citizens.

C. Other projects

C. Other Field Organizing Comments*

1. Whatever strategies and publicity methods are chosen to motivate participation, it is essential that the project and participation methods be within the experience of the community within which the project is meant to operate. If flyers, posters, workshops, etc. are drawn up or conducted in a way not relevant to the citizens who are to become involved, the project is doomed to failure. It is important that organizers start where the people are in a psychological, social, and political sense. For example, using a petition campaign or protest rally at the very beginning of a project in a religious, conservative community rather than a slideshow at a local town meeting might alienate rather than interest citizens.

2. Organizers should choose participation strategies which are exciting and enjoyable. Overly dry, serious interactions, e.g., too many meetings as opposed to an outdoor exhibit or fair, may simply cause citizens to lose interest and become bored.

3. It is important that all strategies be well-timed; e.g., a sweep-up that is being organized as part of an anti-litter campaign on a major thoroughfare should be held at a time that would not interfere with maximum storeowner business. All elements in the community should be consulted before a date and time is set so as not to alienate key groups.

4. During all events and in preparing all literature, organizers should concentrate on specifics -- the activities that can be developed to successfully help a project grow or change a situation for the better. Too many theories or abstractions, especially at the initial stage of organization, will bore many citizens and stultify real action.

5. Organizers should keep a log of methods used in developing a project, e.g., workshops, petitions, mailings, and include in the log the successes and failures of each strategy and its effect on the growth of the project.

6. It must be emphasized that if at all feasible organizers should endeavor to develop multi-issue, multi-faceted projects to ensure broad-based support and long-term participation. It is important to concentrate on one or two project ideas at first, e.g., anti-litter, but as citizen participation grows and becomes more enthusiastic it will be possible to stimulate involvement in other solid waste and environmental projects as well.

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* Some suggestions taken from Rules for Radicals, Saul Alinsky, Vintage Books, 1972, pp.126-142.

UNIT E: EVALUATION

#1 Aim: To evaluate reactions and development of the student organizers.

Motivation: Each organizer/supervisor* should meet at regular intervals with his/her organizing class or group and members of any support group available (like CEAC).

Discussion:

a. Are we enjoying the organizing activities?
b. Are the activities good for us?
c. How are we relating to other students in the school?
d. What about our relationships with other community groups in the neighborhood we are organizing in?
e. How are we relating to the citizens we are involving in the project? What problems are we encountering in our individual relationships, interactions, etc., with storeowners and other citizens?
f. Are we relating to the community's needs and not allowing our personal goals, ambitions, needs to interfere with the development of a community-controlled project?
g. What organizational skills are we utilizing?

Follow-up:

. Through role playing, discussion, etc., these questions should be examined. Solutions to problems can be proposed and analyzed by the group. The various project subcommittees may need to meet and go through similar steps of personal awareness and evaluation.

. An interesting area for discussion here is the questions of the values that underlie any organizational effort. The organizing process that students have initiated could be utilized to promote or support any political ideal or human service and it is important for students to understand this and to analyze situations in history where organizing techniques have been used for negative purposes, e.g., in Germany in the 1930's or for extreme political causes in the U.S.

* Just a reminder: organizer/supervisor would refer to college student supervising high school students or teacher supervising college and graduate students, or group leader supervising youth group, depending on model being used.

#2 Aim: To determine the quality and quantity of participation in the project.

Motivation: A speaker from a small computer information technology firm on the storage, evaluation, and use of information.

Discussion:

a. Determine the numbers and kinds of people involved in the project. Use:
   - questionnaires to all those on mailing lists.
   - records of attendance at workshops, meetings, events -- numbers and regularity.
   - number of people on committees, patrols, etc.
   - number of people occupying leadership positions.
   - the age groupings, ethnic backgrounds, community groups that participants represent.

b. Have the class or each project group draw up a participation summary. The summary should include a quantitative/qualitative breakdown of participation. For example:
   - Initial participation would be those citizens who attended one or two events or participated in some mimimal way but discontinued their involvement in the process soon after their first experience.
   - Intermediate or occasional participation would be those who persisted to some degree after an initial set of experiences, e.g., came to several meetings or workshops before terminating involvement or participated in an intermittent manner throughout the entire course of project development.
   - Final or ongoing participation would fit those persons who came to most meetings or events, assumed leadership or other functional roles, performed the tasks required by the project consistently, etc.
   - Each community and project will, of course, require different behavioral and managerial definitions at different levels of participation.

c. As an example of a participation analysis, a high school organizing group coordinated an aluminum recycling project in an elementary school. Of the 350 students in the school, the breakdown was as follows (see recycling chart on page 65):
   - Initial Participation: Students who brought in cans 3 times or less during the school year, but did not become more involved - 60 (17%).
   - Intermediate or occasional participation: Students who brought in cans 3-10 times - 60 (17%).
   - Final or ongoing participation: Students who brought in aluminum cans on a weekly basis and/or who came to some recycling team meetings or were class captains for some period of time during the school year - 30 (8%).
   - Total student participation: 150 out of 385 (44%).
   - Of the 15 teachers in the school, all participated and were equally spread over the three participation categories.
   - Of the 500 parents whose children are in the school, about 200 (40%) participated initially, that is, they helped the children collect, clean, bag, and transport cans. Approximately 30 parents (6%) were involved in intermediate participation, attending some meetings, participating in recycling discussions at school executive committee

meetings, etc. A core group of 5 parents (1%) helped coordinate the project from its inception. Thus, total parent involvement was 235 (47%).

- The principal and other members of the school administrative staff participated actively.
- A good indication of successful participation in the project would be to combine intermediate and final participation to get a figure for quantitative and qualitative involvement.
- Thus, 90 students (27%) participated on a meaningful level.
  35 parents (7%) were intensely involved.
  10 teachers (67%) were involved in a consistent manner.
- Total participation of any kind in the whole school population was 42% while the intermediate plus final figure was 16%.
- These participation percentages for the school recycling program were relatively high compared to most new programs, but certainly other strategies are needed to increase participation.
- These figures are not the only indices of participation. Qualitative factors like participation of key persons in the school administration -- the principal, school-community council president, etc. -- were important in ensuring the project's success. The core group of parents who helped plan and coordinate was a key factor. The project motivated a large number, 35 (out of about 60, or 50%) of the parents who actually work in the school to participate (as opposed to the parent-body as a whole). However, the organizers have yet to motivate a group of parents, students, teachers, etc. to take responsibility for the entire project so that it can function without outside organizers.

Follow-up:

1) As the preceding example demonstrated, both quality and quantity must be considered in evaluating participation. Some other aspects of project development to be analyzed are:
   a. Is the project continuing?
   b. Is the program institutionalized in the school or community?
   c. What actual environmental changes have taken place?, e.g., in the aluminum recycling project 2,000 pounds of aluminum were recycled, 46,000 cans were taken from the garbage load, 13,000 kilowatt-hours of electricity were saved, and $400 was earned by the school.

2) Certain technical things should be done on an ongoing basis for evaluation purposes.
   a. The organization's mailing lists should be categorized, e.g., type of group, school district, community board area, press, etc.
   b. Aside from evaluation purposes, percentages of responses (phone calls, tear-off slips, workshop attendance) on each list should be kept along with correlations concerning percentage of responses in different situations for each list.
   c. Workshop and other group meeting statistics should be kept so that organizers know, for example, which workshop topics stimulated attendance and motivated participation.
   d. Workshop participants should sign a sheet at each workshop giving their addresses and phone numbers, so that they can be polled if necessary.

e. Comparisons of participation stemming from various general strategies -- mail, meetings, block parties, events in different situations -- should be made and recorded. Even if numerical statistics cannot be kept, some written description in a log should be made so that future organizing groups can assess the potential of strategies.

UNIT F: SPECIAL SECTION ON LEGISLATIVE ACTION

Introduction

Many Americans do not participate in the democratic process. A large number of citizens do not vote, either in local or national elections (only 52.3% of eligible voters voted in the 1980 Presidential election, according to the League of Women Voters), and few citizens write their elected officials to express their views on issues. In fact, many Americans cannot even name their congress people or senators.

A Legislative Action Campaign can be an effective means of educating students and citizens on a particular environmental issue, and encouraging them to participate in the democratic process. A campaign can take the form of a letter writing drive, a phone campaign, or a petition collection. Of the three, letter writing is the most effective means of communicating with representatives.

Each letter that a senator, representative or local legislator receives is read and answered, and its views are recorded. Since so few people write to their legislators, a single letter is felt by the recipient to represent the views of up to 50, 100, or even 500 other constituents. If 200 letters are written on an issue, an elected official could estimate that between 10,000 and 100,000 voters hold the same views.

A campaign could work this way: students would select an issue (not necessarily a piece of legislation, but a local environmental issue they wish to draw attention to), they would study the issue thoroughly, form an opinion, and make presentations to fellow students and community groups urging them to write letters to legislators. The students would be responsible for developing and organizing the campaign, with assistance from a teacher or other organizing supervisor.

A Legislative Action Campaign can fill several important functions: students will be educated on an environmental issue; they will gain organizing, and in particular, public speaking experience; citizens will be educated on the issue; and hopefully a substantial number of letters will be generated by the campaign directed at key legislators. Students who may be interested in environmental problems and in organizing, but not necessarily in "street level" projects, could find a ready outlet for their interest in such a campaign.

It must be emphasized that a Legislative Action Campaign has to originate from the students. The idea may be introduced by the teacher initially, but the students must be enthusiastic about participating. A Legislative Action Campaign must not be used to manipulate students' political views, or to use students as a lobbying tool. A campaign should provide a forum for discussion of <u>both</u> sides of an issue, out of which an opinion is formed and a letter-writing campaign could be developed, should the students decide <u>as a body</u>, after thorough discussion, that such action is warranted and feasible. The students have selected a project, and they are responsible for the views expressed in its execution, not the teacher or the school. They become organizers and are trained to elicit student and community support for the issue involved. They are working for change in a specific and highly educational way.

A phone campaign (in which citizens are urged to call their representatives about a particular issue) or a petition drive could be organized by the students. Also, students could arrange to meet with their elected officials at the local office to express their views on a topic, and elicit the official's views. All legislators have local offices, and appointments can be arranged with them, or with their staffs. To repeat, this type of project need not be directed at a specific bill, but could instead be directed at an issue that the students feel strongly about.

#1 Aim: To learn how and why citizen participation in the legislative process is important.

Discussion:

- Ask students to name their senators and congressmen.
- Ask students to name their state representatives.
- Ask students to estimate the percentage of eligible voters who voted in the last Presidential election.
- Ask students to discuss local or national environmental laws or proposed legislation, to determine their awareness of the issues.
- Discuss local environmental issues with the students, and the effect that active citizen participation could have upon the issue(s).
- Discuss with students their participation in community affairs.
- Discuss the effect that citizen participation has had on certain issues.

#2 Aim: To organize a Legislative Action Campaign in the school and community.

Discussion:

- Discuss with students the legislative process and how it works.
- Discuss with students various pieces of legislation or issues, and the reasons for citizen action.
- Have the students debate the issue.
- Determine as a class the particular officials that should be targeted in a campaign.
- Develop a thorough knowledge of the legislation or issue among the students, and an effective presentation that they can give.
- Develop an outreach strategy within the school, assigning students to speak before selected classes, clubs, etc.
- Develop an outreach strategy for the community, assigning students to speak before the PTA, community organizations, etc.
- Develop a system to monitor accurately the number of letters written.

Follow-up:

It is important to carefully monitor the number of letters written. Students can give their presentations to a class or community group, and return the next week with envelopes and stamps to receive the written letters. This way, an accurate gauge of the campaign's effectiveness can be maintained.

To summarize, the main goal of a Legislative Action Campaign is educational. Students should be made aware that democracy is in danger if citi-

zens do not participate in their government by following the issues, by writing their representatives, and by voting in elections. The aim is not to foster a particular political orientation in students, but to effect a change in attitudes about the process itself. If students can be made aware of the political process, if they can be made aware of the importance of communicating with representatives, and if this awareness engenders in them a more positive attitude toward active participation in their society, then a Legislative Action Campaign can be deemed a success.

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